UW Medicine

HARBORVIEW
MEDICAL CENTER

6/26/2015

Harborview Medical Center (HMC) is soliciting proposals for replacement of HMC existing Parking Program.

Attached, please find Harborview's Request for Proposals No.HMC 15-067. Please note that all responses are due no later than 12:00 PM local time on 08/11/2015 to:

> Harborview Medical Center
> University of Washington Medicine (UWM) Supply Chain Department
> jra24@uw.edu
> Attn: Jennifer R Aberle

Thank you for your interest in Harborview Medical Center. If you have any questions please contact me in writing at jra24@uw.edu.

Sincerely,

Jennifer R Aberle
Senior Buyer
UWM Supply Chain Department
(206) 598-8832
Fax: (206) 598-6769

enclosures

UW Medicine
HARBORVIEW MEDICAL CENTER

REQUEST FOR PROPOSAL

For

Replacement of HMC existing Parking Program

Issued by:

Harborview Medical Center
UWM Supply Chain Department

SECTION 1 - INSTRUCTIONS TO PROPOSERS

1.1 GENERAL DESCRIPTION OF HARBORVIEW MEDICAL CENTER

Harborview Medical Center (HMC) is a 413 bed academic medical center, owned by King County and managed by the University of Washington. Harborview serves a unique role in the community. It is the only Level 1 Trauma Center in a four state region (Idaho, Alaska, Montana, and Washington) and serves as the regional burn center for the Pacific Northwest. It also offers specialized tertiary programs in spinal cord and head injury rehabilitation, epilepsy, orthopedics, AIDS and neurosurgery. Outpatient services at the medical center and at five off-site locations provide primary and psychiatric care to a growing number of patients. Harborview cares for patients regardless of their ability to pay.

Harborview is one of two teaching hospitals for the University of Washington (UW) and a center of extensive clinical research. All members of the medical staff are faculty of the UW School of Medicine and all staff are University of Washington employees. The University of Washington management contract with King County extends to the year 2015.

Harborview does not receive operating support from the University of Washington, King County or the state of Washington. Virtually all operating support comes from reimbursement for patient care. Approximately 60 percent of Harborview's patients are covered by Medicare, Medicaid or are uninsured - the highest percentage of any hospital in the state. King County voters partially support Harborview's construction projects through ballot measures.

1.2 SCOPE OF WORK

Harborview Medical Center is seeking a vendor to for replacement of HMC existing Parking Program.

1.3 PROPOSAL SUBMISSION

Sealed proposals must be submitted on or before 08/11/2015 at 12:00p.m., local time, to:

> Harborview Medical Center
> UWM Supply Chain Department
> jra24@uw.edu
> Attn: Jennifer R Aberle

If hand delivered, please deliver to:7561 63RD Ave NE, Bldg. 5B, Attn:Jennifer Aberle

The proposal must be signed by such individual or individuals who have full authority from the proposer to enter into a binding contract on behalf of the proposer so that a contract may be established as a result of acceptance of the proposal submitted. By reference, the terms and conditions set forth in the Request for Proposals shall serve as the contract terms and conditions. No other terms and conditions will apply unless submitted as a part of the proposal response and accepted by Harborview Medical Center.

Any proposal received after the exact time specified for receipt will not be considered.

1.3   REQUEST FOR PROPOSAL TENTATIVE SCHEDULE

RFP Issued	6/23/2015
Proposal bid conference and campus tour	7/7/2015
Contractor's questions due date	07/14/2015 by 5:00 pm
HMC provides answers due date	07/28/2015 by 5:00 pm
Contractor's proposal due date	08/11/2015 by 12:00 pm
HMC notifies finalists	08/25/2015 by 5:00 pm
Presentation by finalists (if needed)	09/10/2015
Apparent winner notified	09/15/2015

1.5   INQUIRIES

All inquiries concerning this request shall be submitted no later than 07/14/2015 by 5:00 pm and in writing to:

> Harborview Medical Center
> UWM Supply Chain Department
> jra24@uw.edu
> Attn: Jennifer R Aberle

Vendors should consider the UWM Supply Chain Department as the first and prime point of contact on all matters related to the procedures associated with this RFP. If additional information is needed from any source, the UWM Supply Chain Department will work with the vendor and the various offices of Harborview Medical Center to gather that information. The UWM Supply Chain Department can also be reached at:

> Telephone: (206) 598-8832
> Facsimile: (206) 598-6769

1.6   INTERPRETATION, CORRECTIONS OR CHANGES IN RFP

Should a vendor find any discrepancies in, or omission from, the specification, or have doubt as to their meaning, the vendor shall notify UWM Supply Chain Department in writing at once, and in any case no later than the last day to submit written inquiries. UWM Supply Chain Department will send written instructions or addenda, as required to all interested parties. All addenda issued shall be incorporated into the solicitation and subsequent contract. Harborview Medical Center shall not be responsible for or bound by any oral interpretations.

Any interpretation, correction or change in the RFP will be made by formal addendum by Harborview Medical Center. Interpretations, corrections, or changes to the RFP allegedly made in any other manner will not be binding, and no proposer may rely upon any such interpretation, correction or change.

1.7   MODIFICATION OR WITHDRAWAL OF PROPOSALS

At any time prior to the specified time and date set for the proposal closing, a proposer may withdraw a proposal or modify same. Such a request for modification or withdrawal must be in writing executed by a person with authority as set forth under paragraph 1.3 above, or by telegraphic notice subsequently confirmed in writing.

1.8   ERASURES AND INTERLINEATIONS

Erasures, interlineations, or other changes in the proposal must be initialed by the person(s) signing the proposal.

1.9   ACKNOWLEDGMENT OF AMENDMENTS OF RFP

Receipt of an addendum to this RFP must be acknowledged by a proposer on the Proposal Response Certification (Attachment A).

1.10   PROPOSAL COPIES

In support of the University of Washington Policy on Environmental Stewardship, the Supply Chain Management Department is committed to promoting environmentally and socially responsible actions. To assure compliance with these policies, all RFI responses are to be presented simply and economically as follows:

1.   Electronic Mail (email) submission of PDF documents for any forms requiring Vendor signature (s)
2.   Email submission of any data and pricing submissions via use of Microsoft Excel spreadsheets.
3.   Email submission of any contract revisions via Microsoft Word documents, set up for redlines, which may be password protected for changes but cannot be "read-only" documents. Contract revisions may also be submitted in PDF format, as long as the document is redlined to indicate desired revisions. (Note: Final contracts and negotiation of same to Awardee(s) must be conducted using Microsoft Word documents, set up for redlined tracking of changes.).

1.11   OFFER ACCEPTANCE PERIOD

Proposal (offer) shall remain in effect for a minimum period of one hundred eighty (180) calendar days from the proposal opening date unless otherwise indicated and is irrevocable.

1.12   REJECTION OF PROPOSALS

Harborview Medical Center expressly reserves the right to reject any or all proposals, reissue a Request for Proposals, and to waive informalities, or minor irregularities and discrepancies.

1.13   PREPARATION COST

Harborview Medical Center will not be liable for any costs associated with preparation and presentation of a proposal submitted in response to the RFP.

1.14   PROPOSAL PRICE

The prices submitted in the proposal shall include everything necessary for the prosecution and completion of the contract including, but not limited to, furnishing all materials and all management, supervision, labor and service, except as may be provided otherwise in the proposal. In the event of discrepancy between the unit prices and their extensions, the extended price will be adjusted accordingly. In the event of discrepancy, between the sum of the extended prices, the total proposal price will be adjusted accordingly. The proposal price shall not include any allowance for Washington State sales/use tax.

Harborview Medical Center will evaluate the total price for the basic requirements with any option(s) exercised at the time of award. Evaluation of option(s) will not obligate Harborview Medical Center to exercise the option(s).

Harborview Medical Center may reject an offer if it is materially unbalanced as to process for the basic requirements and the option quantities. An offer is unbalanced when it is based on prices significantly less than cost for some work and prices that are significantly overstated for other work.

1.15   AWARD OF CONTRACT

The award shall be made by Harborview Medical Center to the responsible proposer whose proposal will be most advantageous to Harborview Medical Center with respect to price, conformance to the specifications, quality and other factors as evaluated by Harborview Medical Center. Harborview Medical Center is not required or constrained to award the contract to the proposer proposing the lowest price.

Harborview Medical Center may award a contract on the basis of initial offers received, without discussion; therefore, each initial offer should contain the offerer's best terms from a cost and technical standpoint.

If awarded a contract based on this Request for Proposals, proposer agrees that other component units of UW Medicine namely, UW Medicine/Northwest dba Northwest Hospital and Medical Center and its associated clinics ("NWH"), Public Hospital District No. 1 dba Valley Medical Center and its associated clinics ("VMC") and the University of Washington Medical Center and its associated clinics may join the awarded Contract upon that UW Medicine Component Unit's agreement to each and every term of the Contract by signed, written amendment.

1.16   CONTRACT TERMS AND CONDITIONS

The submission of a proposal herein constitutes the agreement of any proposer that any contract to be drawn as the result of an award herein shall be prepared by HMC. The submission of a proposal shall further constitute the agreement of each proposer that it will not insist on the use of standard contract agreements, documents, or forms, and that it waives any

demand for the use of its standard agreements. HMC intends the contract form and substance will substantially relate to, and generally follow, this Request for Proposals.

1.17   PROPOSAL CONFIDENTIALITY

It is the intent to receive proposals in response to this RFP, at the time and placed designated in Section 1.3. At that time, only the names of the respondents submitting proposals will be released.

Each proposer, as an expressed condition for Harborview Medical Center's consideration of such proposer's proposal, agrees that all proposals received, with the exception of items therein which are public information shall remain confidential until the contract, if any, resulting from this RFP is signed. After signing of the contracts, all information submitted as part of each respondent's response shall become part of the public records for this acquisition. All documents submitted, as part of this acquisition process must be considered part of the public record and available for any party upon request.

Marking of the entire proposal as proprietary will be neither accepted nor honored. If a request is made to view a respondent's proposal, Harborview Medical Center will comply according to appropriate Public Disclosure Commission Procedures.

Washington State Law RCW 42.17.310(h) allows an exemption from public disclosure for materials that contain "valuable formulae, designs, drawings, and research data when disclosure would produce private gain and public loss." This is the only exemption granted by law that might apply to this acquisition; however, please be advised that proposers will need to demonstrate that disclosure of their materials would produce both private gain and public loss.

SECTION 2 - INSTRUCTIONS FOR PREPARING PROPOSALS

2.1   GENERAL

To aid in the evaluation process, it is required that all responses comply with the items and sequence as presented in paragraph 2.2, RFP Response Outline. Paragraph 2.2 outlines the minimum requirements and packaging for the preparation and presentation of a response. Failure to comply may result in rejection of the response. The proposal should be specific and complete in every detail, prepared in a simple and straightforward manner.

Proposers are expected to examine the entire Request for Proposals, including all specifications, standard provisions and instructions. Failure to do so will be at the proposer's risk. Each proposer shall furnish the information required by the invitation. It is required that proposal entries be typewritten. Periods of time, stated in number of days, in this request or in the proposer's response, shall be in calendar days.

2.2   RFP RESPONSE OUTLINE

    A.   Response Sheet: The Proposal Response Certification (Attachment A) shall be attached to the front of the proposal and shall contain the proposer's certification of the submission. It shall be signed by an official who has full authority to enter into a contract.

B.	Background and History: Describe the company, its age, organization, officers or partners, number of employees and operating policies which would affect this contract. State the number of years the organization has been continuously engaged in business.

C.	Financial Stability: Describe the financial status of the company. Attach a copy of the most recent annual financial statement or other such document.

D.	Technical Approach and Methodology: Please describe your technical approach and methodology for accomplishing the described scope of work. Your proposed approach and methodology should include a detailed work plan and schedule. All information to be provided by HMC as part of this plan needs to be specified including content, format and frequency.

E.	Project Team and Management Structure: Identify your proposed project team and management structure for completing the scope of work. This should identify roles and responsibilities, including your expectations of HMC staff resources. Provide resumes on key professional staff to be assigned to the project and their level of commitment to this engagement.

F.	Proposed Fees: Provide a fee proposal to accomplish the scope of work.

G.	Firm Experience and Firm Credentials: Please provide evidence of your firm's experience in projects such as the one described within this proposal.

H.	References: Please list three relevant references, including a description of the engagement, professional fees, duration and date of completion, contact person and his/her title, address, FAX and telephone number.

I.	Vendor Exceptions: Describe any exceptions to the terms and conditions contained within this document. Add comments about the project of concern to the vendor.

J.	Contract Management Information: Provide primary contract manager contact name, mailing address, phone, fax and email information.

SECTION 3 - TECHNICAL SPECIFICATIONS

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D.   Section 11 12 11 contains the requirements for replacement of the Harborview Medical Center's (HMC) existing Parking Program. The replacement shall not only utilize the industry's latest technological advancements to control access and revenue for the parking facilities but shall improve the overall management, system efficiency, revenue accounting, revenue security, and customer service aspects of the parking operations at the HMC. This project shall implement hardware and application software that will meet HMC's parking access and revenue control needs for at least 10 years after the system's final acceptance.

E.   This project will replace the existing access and revenue control systems at all public and employee parking facilities. In addition, this project will replace the existing Permitting System to control employee access and parking.

1.02   REFERENCES

A.   Codes and Regulations:

1.   Local Codes: Comply with State and Local codes as applicable.

B.   Information Security Standards and Requirements:

1.   Payment Card Industry Data Security Standard (PCI DSS), latest version at the time of Contract Award
2.   Payment Application Data Security Standard (PA DSS), latest version at the time of Contract Award
3.   EMV standards

1.03   DEFINITIONS

A. Definitions of terms used in these specifications are located in the General Requirements and as follows:

   1. Acts of God – Those events which are outside of control of humans and for which no one can be held responsible and which cannot be prevented. Acts of God include, but are not limited to, severe weather phenomena such as hail, flooding, extreme drought, hurricanes, tornados, tropical storms, fire, earthquakes, and lightning.

   2. APS – Automated Pay Station: a strategically located computerized PARCS device that is used to process patron exit payments prior to returning to their vehicle; an APS can be configured to accept credit cards, cash, coins, or a combination thereof; can be used as a method for promoting expedited exiting; commonly referred to as: *Pay-on-Foot Station* (POF).

   3. Backlit**:** An electronic static message sign that displays an illuminated message, such as "OPEN/CLOSED" to patrons by shining a light through opaque colored filters that illuminate to display the message.

   4. B2B – Business-to-Business: an online, web enabled system to allow large users, such as other Departments, to apply for permits, manage their accounts, and access charges and invoices.

   5. B2C – Business-to-Customer: an online, web enabled system to allow individual customers to apply for permits and manage their accounts

   6. Barrier Gate – An automated gate utilized by the system to control ingress into and egress from a parking facility.

   7. Cashier Station – a computerized device located in a staffed cashier booth at an exit lane that facilitates multiple methods of exit from a parking facility; commonly referred to as: *cashier terminal*.

   8. CBEMA – Computer and Business Equipment Manufacturers Association: The CBEMA curve illustrates the acceptable under-voltage and over-voltage conditions that most equipment can sustain for a period of time.

   9. CCI/CCO – Credit Card In/Credit Card Out: an express parking transaction whereby a patron inserts a credit card into an entry station to gain access into a parking facility. Upon exit the patron inserts the same credit card into the exit station. The system matches the entry event with the exit event, calculates the appropriate parking fee, and charges the credit card. Upon positive authorization of the credit card, the barrier gate raises and patron exits the facility.

   10. CCTV – Closed Circuit Television: a combination of video cameras, infrastructure, recording devices, and monitoring stations that allow an entity to remotely monitor a device, area, facility or operation for security, operations, or a combination thereof.

11. CD-ROM – Compact Disk – Read Only Memory: an optical disk used to store data that once created, cannot be erased or filled with new data.

12. Change Control Plan – The Contractor must provide a Change Control Plan that tracks the implementation of application or software changes.

13. Contract Documents – The Contract Documents executed by HMC and the Contractor outlining the requirements for the Work to be performed as it relates to the implementation of the Parking Program.

14. Contractor – The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the Work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the Work.

15. Crash – A system failure in which the Parking Program system cannot properly process revenue transactions.

Dynamic Signage – signage capable of displaying varying text and/or graphics to relay specific messages to patrons via a matrix of LED lights. Dynamic signage can be used for various applications including displaying the method of payments accepted at a specific lane, the number of available spaces in a facility/level, or providing guidance to patrons

1. EMV – The standards required by the Europay Mastercard Visa (EMVco) regarding the requirement for owners to accept the new "Chip and PIN" credit cards.

2. Entry Station – a computerized device located in an entry lane that facilitates multiple methods of entry including issuing a magnetically encoded or barcode parking ticket, ingesting and reading a magnetically encoded or barcode access card or credit card, reading an AVI transponder, reading a proximity access card, or reading a contactless credit card; commonly referred to as: *ticket issuing machine* or *TIM.*

3. E-Permit: A process where permits are assigned to one or more vehicles through a web-enabled application and a paper hang tag is not printed or provided the patron.

4. Exit Station – a computerized device located in an express exit lane that facilitates multiple methods of exit from a parking facility including ingesting and reading a magnetically encoded or barcode parking ticket, ingesting and reading a magnetically encoded or barcode access card or credit card, or reading a proximity access card or credit card fob via RFID. The exit station uses the data from the inserted or detected media to validate exit privileges or calculate and process the associated parking fee; fees can be paid via credit card, or exit is granted via access card or

validated/pre-paid magnetically encoded ticket; commonly referred to as express exit terminal or exit verifier.

5. FMS – Facility Monitoring System: A system that provides operational and performance information of the system components

6. GTMS – Ground Transportation Management System

7. GUI – Graphical User Interface: A program interface that takes advantage of a computer's graphics capabilities in an attempt to make the program user-friendly and intuitive to use.

8. HMC – an abbreviation for the Harborview Medical Center.

9. IDF – Intermediate Distribution Frame: a room that interconnects and manages the telecommunications wiring between a MDF and field devices or workstations.

10. IP – Internet Protocol: IP is a network layer protocol in the Internet protocol suite and is encapsulated in a data link layer protocol (e.g., Ethernet). As a lower layer protocol, IP provides the service of communicable unique global addressing amongst computers.

16. IRW – Image Review Workstation: a workstation that is used to review images from the LPR system.

17. ISO – short for International Organization for Standardization: An international organization comprised of national standards bodies from around the world. ISO is the world's largest developer and publisher of standards.

18. LAT – Lane Acceptance Test: a test of a Contractor's installed equipment at the lane level to ensure that the equipment meets the intent of these Functional Specifications. LATs are conducted on all entry lanes and exit lanes.

19. LCIP – Lane Control Interface Processor: The computer processor used for communication between the Servers and the lane equipment.

20. LED – Light Emitting Diode: a type of light commonly used for dynamic signage.

21. LPN – License Plate Number

22. Major Deviation – Any deviation or failure of a LAT or Site Acceptance Test procedure that affects fee calculation accuracy, transaction count accuracy, exception count accuracy, active ticket inventory accuracy (system vs. actual), revenue processing, calculations, or reporting.

23. MDF – Main Distribution Frame: a cable rack that interconnects and manages the telecommunications wiring between itself and any number of IDFs. Generally, the MDF connects private and public lines to an internal network.

24. Minor Deviation – Any deviation or failure of a LAT or Site Acceptance Test procedure that does not affect fee calculation accuracy, transaction count accuracy, exception count accuracy, active ticket inventory accuracy (system vs. actual), revenue processing, calculations, or reporting.

25. NEMA – National Electrical Manufacturers Association: An association that develops standards related to the generation, transmission, distribution, control, and end-use of electricity.

26. N-Factor – a term used to quantify the accuracy of the OCR for an automated license plate reading system including LPR, where "N" represents the number of characters on any given license plate. If all characters are interpreted correctly by the OCR then it is said to be an "N read". If all but one character is read correctly then it is said to be an "N minus one" or "N-1" read, etc.

27. NEC – National Electric Code: part of the National Fire Code, the NEC is a standard for the safe installation of electrical wiring and equipment.

28. Normal Conditions - Normal conditions are considered to be equipment malfunctions, parts usage under normal wear and tear, and performance of scheduled services.

29. Normal Weather Conditions - Normal weather conditions are applicable to weather conditions that are common to the Seattle, Washington region such as rain, driving/tropical rain, strong thunderstorms, drought, freezing temperatures, snow, hail, ice, and high winds, among others.

30. ODBC – Open Database Connectivity: In computing, ODBC provides a standard application software programming interface method for using database management systems. ODBC is intended to infer an independence from programming languages, database systems, and operating systems.

31. ODT – Operational Demonstration Test: a test of a fully installed system to monitor the system during normal operating conditions and ensure that the system is functional over a defined period of time in a manner consistent with the intent of these Functional Specifications.

32. OPC – Opinion of Probable Cost: Kimley-Horn's opinion based on historical cost data and similar project experience, of the probable cost of the replacement Parking Program.

33. OTDR – Optical Time Domain Reflectometer: an instrument that analyzes

the light loss in an optical fiber in optical network trouble shooting

34. Out-of-Area Permit – This permit is used by patrons who have a valid permit to park in one area but are required to park in a different area for a period of time.

35. PA DSS – Payment Application Data Security Standard: a set of comprehensive data security requirements and parameters for computer applications that process credit card payments.

36. Pay-on-Foot Station: a computerized device that facilitates payment of parking fees prior to a patron returning to their vehicle.

37. PARCS – Parking Access and Revenue Control System: A combination of equipment, subsystems, and supporting infrastructure that allows an entity to accurately calculate, collect, track, and report revenues for parking within one or more facilities. A PARCS also monitors and controls ingress and egress to and from those facilities.

38. PC – Personal Computer: a microcomputer designed for individual use for such applications as word processing, data management, or financial analysis.

39. PCI DSS – Payment Card Industry Data Security Standard: a set of comprehensive requirements and parameters for enhancing payment card account data security to help facilitate the broad adoption of consistent data security measures on a global basis.

40. PDF – Portable Document Format: a document-encoding process developed by Adobe that maintains page layout, fonts, and graphics and can include many other features such as hyperlinks

41. PIN – Personal Identification Number: A number selected by a user to gain access to certain areas of the system.

42. Preventative Maintenance - This type of maintenance includes but is not limited to scheduled inspection, testing, necessary adjustment, alignments, lubrication, parts cleaning, replacement of consumables, communication system maintenance, server administration, database administration, and application support of the hardware and software.

43. Pay-Per-Use-Parking (PPUP) – This is a special program that allows certain patrons to pay for parking using a pre-recorded debit card. Usage is accumulated for the month and the total charge is deducted from the employee's payroll account.

44. PSCS – Parking Space Count System: a combination of vehicle detection devices, dynamic signage, and supporting infrastructure that allow for the automated counting of vehicular ingresses and egresses to and from a parking facility, level within a facility, and zone within a level. The

resultant count is displayed on operational workstations as well as a series of dynamic signs to inform patrons of the location of available parking; a subsystem to a Parking Program.

45. PSMS – Parking Space Management System: a combination of vehicle detection devices, variable message signs, and supporting infrastructure that allow for the automated detection of vehicular presence in individual parking spaces within a parking facility. The resultant facility, level, zone, and/or aisle counts are displayed on operational workstations as well as a series of VMS to inform patrons of the location of available parking spaces; a subsystem to a Parking Program.

46. QA/QC – Quality Assurance/Quality Control: The quality processes and quality checks used to ensure the system and its components comply with the Contract requirements.

47. RAID – Redundant Array of Independent Disks: A technology that employs the simultaneous use of two or more hard disk drives to achieve greater levels of performance, reliability, and/or larger data volume sizes. The phrase "RAID" is an umbrella term for computer data storage schemes that can divide and replicate data among multiple hard disk drives. RAID's various designs all involve two key design goals: increased data reliability and increased input/output performance. When several physical disks are set up to use RAID technology, they are said to be in a RAID. This array distributes data across several disks, but the array is seen by the computer user and operating system as just one, single disk.

48. RAM – Random Access Memory: A type of computer data storage utilizing integrated circuits that allow stored data to be accessed in any order, i.e. at random. Any piece of data can be returned in a constant time, regardless of its physical location and whether or not it is related to the previous piece of data

49. RFI/EMI – Radio Frequency Interference / Electromagnetic Interference: Radio Frequency and Electromagnetic Interference are phenomena that occur when the radio frequency of electromagnetic field of one device disrupts, degrades, or impedes another device.

50. RFID – Radio Frequency Identification: the technology utilized by proximity card systems, such as HID™ or PayPass™, for identifying a patron's credential. A RFID system consists of an antenna, a transceiver (which reads the radio frequency and transfers the information to a processing device), and a transponder, also called a tag (which is an integrated circuit containing the RF circuitry and information to be transmitted).

51. Remote Payment Device – A revenue control device that is not a part of a PRCS lane that includes a barrier gate device. These devices may be a multi-space meter, a handheld cashier device, a handheld citation computer, etc. These devices shall process a patron transaction and

communicate with the server in real-time.

52. Site Acceptance Test: A test of a Contractor's installed equipment at the site or facility level over a defined period of time to ensure that the equipment meets the intent of these Functional Specifications.

53. SNMP – Simple Network Management Protocol: SNMP forms part of the internet protocol suite and is used in network management systems to monitor network-attached devices for conditions that warrant administrative attention.

54. SQL – Structured Query Language: a database computer language designed for the retrieval and management of data in relational database management systems, database schema creation and modification, and database object access control management.

55. TCP/IP – Transmission Control Protocol/Internet Protocol: The Internet Protocol Suite (commonly known as TCP/IP) is the set of communications protocols used for the Internet and other similar networks.

56. TIA – Telecommunications Industry Alliance: Associations that helps develop standards for the telecommunications and electronics industries.

57. TIM – Ticket Issuing Machine: a PARCS device located in an entry lane that issues pre-printed tickets on credit-card sized ticket stock, with either a magnetic stripe, a series of hole-punches, or bar codes to record entry information for subsequent parking fee calculation at a cashier terminal; used in the existing Parking Program.

58. UL – Underwriters Laboratories, Inc.: UL is a U.S. not-for-profit, privately owned and operated product safety testing and certification organization. Based in Northbrook, Illinois, UL develops standards and test procedures for products, materials, components, assemblies, tools and equipment, chiefly dealing with product safety. UL is one of several companies approved for such testing by the U.S. federal agency OSHA. OSHA maintains a list of approved testing laboratories, known as Nationally Recognized Testing Laboratories.

59. UPS – Uninterruptible Power Supply: A UPS is a device that maintains a continuous supply of electric power to connected equipment by supplying power from a separate source when utility power is not available; also known as a continuous power supply or a battery backup.

60. Unusual Conditions – Unusual conditions are those conditions other than normal conditions that are out of the control of the Contractor. These events include willful or careless damage to the equipment including patron accidental damage as well as Acts of God.

61. VPN – Virtual Private Network: a network that is constructed by using public wires to connect nodes. For example, the Internet may be used as

the medium for transporting data. These systems use encryption and other security mechanisms to ensure that only authorized users can access the network and that the data cannot be intercepted.

62. Work – Services or goods to be provided by the Contractor per the Contract.

1.04 SYSTEM DESCRIPTION

A. The objectives of the Parking Program project include, but are not limited to:

1. All proposals shall include a database-focused software application and appropriate hardware devices including handheld computers, lane and gate equipment, Cashier terminals, and POF stations. Proposals shall include electronic cash drawers, barcode readers, and receipt printers; onsite installation of all components; onsite training for all components; web-based training for all components; technical support and future software/upgrades; as well as appropriate deployment assistance to ensure the system is properly implemented.

2. The Parking Program shall be a fully integrated parking management software system that shall manage access and revenue control data in the same system as permit and enforcement data.

3. The system shall be comprised of multiple types of devices including but not limited to: remote payment devices, PARCS lanes, and provide web access for patron interface. These devices shall interact and provide data for one database located on the centralized server or in an off-site hosted environment.

4. The Parking Program shall provide accurate information provided in both "canned" reports and ad-hoc reports through a user friendly query

5. The software shall be modular and include managers for tracking the following, at a minimum: customers, properties, citations, hearings/appeals, permits, vehicle registrations, booted/towed vehicles, events, lanes, POF devices, wait lists, etc.

6. The system shall be configurable to include the following minimum requirements: fine accumulations/escalations, late fees, permit configuration and values – sale and return with options for prorating over time, and lot definitions.

7. The system shall provide inventory management of all products

8. The system shall minimize manual processes while providing for all non-transient permit holders and departments to manage their personal accounts through web applications

9. The system shall transmit files of receivables and post payments to customer accounts

10. The system shall provide real-time data for parking utilization to allow HMC to better manage parking lot utilization

11. The system shall provide batch-level integration between other systems/applications such as payroll, etc.

12. The system shall provide interaction with the payroll system to provide up-to-date information

13. The system shall allow a sponsoring department to pay for parking based upon amount of time rather than arbitrary blocks of time

14. The system shall provide an integrated Accounts Receivable module to accommodate payment plans, alternative payment systems (payroll deduction, credit card, etc.), and balances carried on individual accounts

15. Achieve a PCI DSS compliant environment and maintain the cardholder environment consistent with ongoing compliance

16. Accurately calculate appropriate fees

17. Accurately document the revenues generated by the parking operations

1. Increase efficiency of operations and maintenance

2. Provide flexibility in timing and formatting of the pertinent operational and management reports

3. Provide flexibility in rate configurations for all parker types

4. Ensure flexibility for any future need to update, upgrade, and/or expand the system readily (additional lanes, additional facilities, new products, etc.)

5. Provide an intuitive and user-friendly interface for HMC, its personnel, and the clients/patrons.

6. The new parking management software shall be browser based and run on the latest version of Internet Explorer

B. The Contractor shall identify and provide HMC with a listing and documentation of all proprietary components utilized in this system.

C. The parking and other control equipment components provided by the Contractor shall operate as a complete system. Each equipment component shall perform its function in relation to other components. As such, each component shall be compatible with every other related component. All components shall be compatible with the geometric circumstances of the facility or place where they are installed.

D. The Contractor shall bring any deficiencies or discrepancies in these specifications that they believe may exist to the attention of HMC in their Proposal. No deficiency or discrepancy in these Functional Specifications shall relieve the Contractor of the responsibility to provide a satisfactorily performing, reliable system.

1.05 SUBMITTALS

A. All HMC comments, responses, and approvals of submittals shall be submitted by HMC to the Contractor. Should the Contractor's resubmittal not incorporate the appropriate comments or otherwise fail to meet the submittal requirements, the submittal cycle shall continue until the Contractor produces an acceptable submittal that is approved by HMC.

B. Submittal schedule (with submittal timing) for all submittals, including those proposed by the Contractor that are not listed in the Contract Documents, to be included in the Contractor's Proposal.

C. Submittals shall include the following:

1.	Proposed interface file specifications and all software documentation including the Data Dictionary for all database files used in the system that shall contain identification and plain English descriptions of all databases, tables, records, fields, field attributes (type, length, permissible values, etc.), and relationships among data.

2.	Shop drawings for review and approval for all field equipment prior to the manufacture or procurement of the equipment. Shop drawings shall include, equipment dimensions, cut out locations for electrical and communications connection points, and manufacturer cut sheets of all Contractor-supplied and third party components incorporated in the various devices (including manufacturer, model number, etc.).

3.	Sample set of reports that are fundamental and readily available with the Parking Program as part of the Proposal. After coordinating with HMC on report layout for all standard and custom reports, the Contractor shall submit a sample format of each report for final approval 45 calendar days prior to the initial installation of equipment at HMC.

4.	Submit manuals 45 calendar days prior to the respective system or subsystem's installation unless otherwise noted. HMC shall review the structure and contents of the manuals. HMC shall return comments to the Contractor within 14 calendar days, and the Contractor shall incorporate all comments into a revised user's manual before installation. The Contractor shall submit the revised manuals for approval prior to commencing system installation. Contractor shall not commence system installation without receipt of written approval of all documents by HMC. The Contractor shall submit the following manuals in both hardcopy and electronic (PDF and Microsoft Word) format:

	a.	Parking Program users manuals
	b.	Parking Program subsystems manuals
	c.	Maintenance manual
	d.	Sales Staff manual
	e.	Cashier's manual
	f.	Audit manual
	g.	Training manuals – including workbooks, lecture notes/overheads, and manuals to be used in live training sessions

5.	Submit a Phasing Plan with the Proposal for the transition from the existing system to the new Parking Program. The Phasing Plan shall be a complete plan for implementation, training and testing and shall include provisions for the new Parking Program to operate concurrently with the old system until implementation is complete. Phasing Plan to include:

	a.	Milestone dates in the form of a Gantt Chart Schedule
	b.	Narrative description of phasing to decommission each lane, install new field devices, perform LAT, and activate for public use
	c.	A lane switchover approach
	d.	Training timing as system is activated

   e. Decommissioning strategy for existing Parking equipment that maintains all critical systems and functionalities throughout the switchover process

   f. Contractor recommendations that benefit the overall project schedule and switchover process

6. As-Built Documentation: The Contractor shall submit as-built documentation of all systems and components installed as part of this project. As-built documents shall include depiction of the actual installed conditions of all equipment and cabling components. In addition, As-built documentation shall include configuration settings of each system upon the completion of any acceptance test. Contractor shall update the most recent As-built documents submitted as further changes occur in the field or as a result of a patch or upgrade to an installed system.

7. Change Control Plan: The Contractor shall submit a change control plan that will provide assurance to HMC that all application changes are provided to HMC under a controlled environment and with the prior knowledge and approval by HMC.

8. Disaster Recovery Plan: The final documentation shall include a disaster recovery plan. The plan shall provide the step-by-step procedures for disaster recovery for each point of failure. These procedures shall be comprehensive.

   a. The first steps shall be in diagnostics. The remaining steps shall provide procedure for resolution in order to bring the system back to full operational status.

   b. Should disaster occur immediately following, or as a result of, a patch or software update the disaster recovery plan shall return the system to the software version in effect prior to the patch or update being applied.

   c. Points of failure shall include each component and sub-components in complex units, such as servers.

   d. The disaster recovery plan shall include requirements for and location of spares.

Testing procedures shall test all system functionalities that are described in these Functional Specifications as well as any other functionalities performed by the system (e.g. standard functionalities) that are not specifically described within these Functional Specifications. The test procedures document shall be submitted for review and comment 45 calendar days prior to a required test. Fourteen calendar days after receipt, review comments shall be returned to the Contractor by HMC. The Contractor shall incorporate HMC's review comments into the Test Procedures. This revised document shall be resubmitted for verification that all comments have been incorporated. The approved document shall be bound and termed the Test Procedures Document. One bound copy shall be an

   1. original, containing original signatures of the test observers and this copy shall become HMC's record copy. No test shall commence until the finalized Test Procedures Document is received. The Contractor shall

develop all test procedures for the tests that are listed below:

    a.   Lane Acceptance Test
    b.   Site Acceptance Test
    c.   Operational Demonstration Test

  B.   The following pages contain a submittal listing of required Contractor submittals and the timing for the respective submittal:

Contractor Submittal	Submittal Timing
Notice of Contractor's withdrawal from manufacture, distribution, or support	120 calendar days prior to withdrawal
Notice of refusal to extend maintenance agreement	120 calendar days prior to withdrawal
Request to begin Site Acceptance Test	30 calendar days prior to completion of LATs
Manual - Manufacturer's recommended maintenance procedures manual	45 calendar days prior to implementation
Manual – Parking Program user manuals	45 calendar days prior to implementation
Manual - Cashier manual	45 calendar days prior to implementation
Manual - Audit manual	45 calendar days prior to implementation
Manual – Sales staff user manual	45 calendar days prior to implementation
Manual - LPR user manual	45 calendar days prior to implementation
Screen layout	30 calendar days prior to implementation
Means for remote scoring of LPR system	30 calendar days prior to implementation
Naming conventions for field devices	30 calendar days prior to installation
Test Procedures – Lane Acceptance Test	45 calendar days prior to test start
Test Procedures – Site Acceptance Test	45 calendar days prior to test start
Test Procedures – Operational Demonstration Test	45 calendar days prior to test start
Manual - Instructional training manuals (workbooks, lecture notes, user manuals)	45 days prior to the respective training class
Instructional Training course outline	45 days prior to the respective training class
Failover & Failback procedures (Disaster Recovery)	45 calendar days prior to implementation
Report Formats and layout for all reports	45 calendar days prior to the first equipment installation
Interface File Specifications	Six weeks prior to implementation
Software Documentation	Six weeks prior to implementation
Data Dictionary	Six weeks prior to implementation
Manufacturer Specifications of components in the event of industry withdrawal	60 calendar days prior to withdrawal
Written evaluation of software modification's impact on Parking Program	Seven calendar days prior to installing modification
Original CD's of 3rd Party Software and Documentation	Prior to acceptance testing
Proposed Instructional Training Schedule	Prior to system implementation
Phasing Plan	Proposal

Sample set of standard reports	Proposal
Proposed data archiving method	Proposal
Shop drawings - UPS units	Proposal
Shop drawings - Entry Station	Proposal
Shop drawings - Cashier Station	Proposal
Shop drawings - Express Exit Stations	Proposal
Shop drawings - Entry/Exit Vehicle Detection Devices	Proposal
Shop drawings - Barrier Gates	Proposal
Shop drawings - Lane Open/Closed Lights	Proposal
Shop drawings - Dynamic Signage	Proposal
Shop drawings - Dynamic Signage controller	Proposal
Shop drawings - Proximity card reader	Proposal
Shop drawings - PSCS vehicle detection devices	Proposal
Shop drawings – Pay-on-Foot device	Proposal
Shop drawings – Remote Payment device	Proposal
Shop drawings - Intercom base station	Proposal
Shop drawings - Entry Station display screen	Proposal
Shop drawings - Express Exit Station display screen	Proposal
Shop drawings - Patron Fee Display	Proposal
Shop drawings - Communication Network Components	Proposal
Shop drawings - Validation re-encoder	Proposal
Shop drawings – handheld citation computer	Proposal
PA DSS Report of Validation	Proposal
Credit Card Processing Subsystem Flowchart	Proposal
Identification of generation of software	Proposal
Software interface documentation	Proposal
Preventative Maintenance Plan	Proposal
Illustrations, drawings, and explanations of proposed Permitting system	Proposal
Illustrations, drawings, and explanations of proposed enforcement system	Proposal
List of clearinghouses for which the Contractor has a certified interface	Proposal
Color Illustrations (photo or scale drawing) of Ticket Dispenser and Close-up of Ticket Dispenser Display	Proposal
Close-up, Color Illustration (photo or scale drawing) of proposed exit station's patron display	Proposal
Color Illustrations (photo or scale drawing) of proposed Pay on Foot (POF) Station and Close-up of POF Station's Display Panel	Proposal

Close-up, Color Illustration (photo or scale drawing) of proposed cashiers station including screen shots	Proposal

Close-up, Color Illustration (photo or scale drawing) of all proposed electronic signs that will be provided as a part of the contract	Proposal
Close-up, Color Illustration (photo or scale drawing) of all proposed remote payment devices that will be provided as a part of the contract	Proposal
Perpetual Software Licenses	When software is installed
Parking Ticket Specifications	Within 30 Days of Contract Award
Parking Program System Design Document	Within 90 Days of Contract Award
Outstanding Punch List items w/estimated completion date	Weekly after the completion of the first LAT
As-Built Documentation	Prior to Final System Acceptance

1.06   QUALITY ASSURANCE

A.   All Parking Program components and their installation shall comply with all laws, ordinances, codes, rules, and regulations of public authorities having jurisdiction over this part of the work. It shall be the responsibility of the Contractor to meet these and all other current technical, performance, and safety standards that are applicable to all components and to the entire system, even when not specifically referenced. It shall be the Contractor's responsibility to obtain any and all permits that are required to complete this work.

B.   The Parking Program shall be an open-architecture system where all interfaces (hardware and software) conform to national and International Organization for Standardization (ISO) standards.

C.   All materials and equipment shall be listed, labeled or certified by a nationally recognized testing laboratory to meet Underwriters Laboratories, Inc. (UL), standards where test standards have been established. Equipment and materials which are not covered by UL Standards will be accepted provided equipment and material is listed, labeled, certified or otherwise determined to meet safety requirements of a nationally recognized testing laboratory. Equipment of a class for which no nationally recognized testing laboratory accepts, certifies, lists, labels, or determines to be safe, will be considered if inspected or tested in accordance with national industrial standards, such as NEMA, or ANSI. Evidence of compliance shall include certified test reports and definitive shop drawings.

D.   Housings of the components exposed to weather shall meet NEMA 4 standards or better to be moisture-proof and shall provide sufficient protection so that the components continue to function without moisture, dust, heat, or extreme cold related interruption.

E.   The Contractor's application software shall conform to PCI DSS standards and be PA DSS certified. The Contractor shall submit the most recent PA DSS Report of Validation as part of their Proposal.

1.07   DELIVERY AND STORAGE

A.   Contractor shall be responsible for insuring all shipped items. Any items damaged during shipping shall be replaced and shipped to HMC, by expedited means if requested, at no additional cost to HMC.

B.   Contractor shall provide the staging and storage area for the equipment. HMC shall provide the Contractor with a designated storage/staging area for equipment that will be installed within the next week. The Contractor shall propose in the Proposal the square footage of area required, and what is planned to be stored in the area. HMC shall determine the exact location after Contract Award. It is the Contractor's responsibility to protect the equipment from theft and damage until final acceptance including installation of fencing, locks, and any other security provisions. Should the stored equipment be stolen or damaged prior to final acceptance, the Contractor shall replace the equipment at no additional cost to HMC.

C.   After equipment is installed, costs (time and material) for repair or parts replacement, components, etc., damaged or rendered unserviceable due to apparent and provable misuse, abuse, vandalism or negligence by HMC employees or the using public are excluded as a cost incurred by the Contractor. Also excluded from the costs incurred by Contractor are damages due to Acts of God that occur after installation.

1.08   PROJECT/SITE CONDITIONS

A.   Environmental Conditions: All field equipment and components shall be fully protected from the ambient environment when installed in the proper housing provided by the Contractor. Operation of the equipment shall not be effected in any way by Normal Weather Conditions. In addition, operation of the equipment shall not be effected in any way by the conditions listed below:

1.   Ambient Temperatures: -10ºF to 120ºF (with addition of solar loading)
2.   Humidity: 0% to 95% (non-condensing)
3.   Rain: Blowing rain with 80 mph gusts
4.   Dust: Blowing dust and fine sand
5.   RFI/EMI: HMC standard environment

The equipment shall be electromagnetically compatible with other equipment at the HMC including radio frequency emissions. The equipment shall not be susceptible to noise induced from the emissions of Electro Magnetic Interference (EMI) of high power radar, navigation aids, and radio

A.   Environmental conditions shall not inhibit the system from performing in accordance with the Contract Documents. The Contractor shall provide a system such that environmental conditions in a cabinet shall not cause failure of the installed electronics.

B.   Electrostatic and electromagnetic forces within the environment, e.g., non-direct lightning strikes, or other types of power interference shall have no effect upon

the integrity or operation of the Parking Program equipment. The Contractor's solution for preventing power interference shall be presented to HMC for approval prior to implementation. Lightning protection through surge arrestors or earthen ground rods or a combination thereof shall be provided and installed for the Parking Program equipment. The Contractor shall determine, based upon their system requirements, the appropriate lightning protection method to use for the location where the equipment is installed. Equipment shall be UL approved for use as part of a master labeled lightning protection system and marked in accordance with UL procedures.

C.   Existing Conditions and Facilities: The parking component of HMC is a self-sustaining organization of the Harborview Medical Center (HMC) that is responsible for the management, staffing, maintenance and safety of all parking structures on campus. Currently the parking inventory stands at 2,167 general purpose parking spaces. Currently, this system employs a variety of different types of parking permits to identify parking privileges and to regulate space utilization by designating the parking assignment and the period of time for which each permit is valid. Requests for parking areas are prioritized and assigned according to work responsibilities

Limited daily parking is available at four parking structures to serve the needs of HMC visitors and staff.

The existing Parking Program was implemented in the late 1990's. The majority of the basic operational functionalities performed by the existing system (ticket issue, gate up, etc.) shall be upheld in the replacement system, however there are no customized or unique features, functionalities, or hardware from the existing system that will be implemented in the replacement application. As such, only a limited discussion of the existing system is provided.

1.   Existing Communications

a.   The existing system consists of entry and exit lane controls communicating via a combination of copper wiring and fiber optic cabling to a central server currently located in the main hospital building.

HMC is in the process of identifying required communications and power to support the new Parking Program field equipment. It is anticipated that the existing communication and power infrastructure will meet the needs of the field

a.   equipment.

6.   Existing Power

a.   The Contractor shall utilize the existing power infrastructure in the new Parking Program.

b.   HMC will provide power, where necessary, to a centrally located

enclosure for all new Parking Program equipment locations. Contractor shall connect all required equipment from the central enclosure.

7.   Parking Facilities

   a.   The parking facilities are included in this project and are further depicted in Appendix 1:

   b.   The existing parking spaces available in each facility are detailed in Figure 1.8.E.1.

Figure 1.8.E.1 - Existing Parking System Equipment and # Spaces

Facility	# Spaces Transient	# Spaces Contract	Total Spaces	Type of Device	Entry/Exits
P1 – ViewPark I and II	237	526	766	Gated	4
P2 – NJB Garage	196	471	667	Gated	5
P3 – Patricia Bracelin Steele Garage	69	230	299	Gated	2
P4 – Boren Garage (employee parking only)		359	359	Gated – Access Control Only	2
Miscellaneous Surface Lots		46	46	Open	
Total	**502**	**1,632**	**2,137**		**13**

1.09   PROJECT SEQUENCING

   A.   The Contractor shall propose sequencing in the Phasing Plan that achieves full implementation and acceptance of the Parking Program with minimal effect on beginning of on the daily operations of the hospital in accordance with the Contract Documents.

1.10   ACCEPTANCE TESTING

   B.   Acceptance testing shall serve to verify the functional performance of the system and its components to ensure adherence to these Functional Specifications. The Acceptance testing process shall not take away from or reduce the responsibility of the Contractor to provide a finished and fully functioning system that meets all requirements of these Functional Specifications. Each application software package, firmware, and hardware equipment component delivered by the Contractor shall undergo acceptance testing as part of the installation process. The acceptance testing of the Parking Program shall occur in the following sequence:

   1.   Lane Acceptance Test

2. Site Acceptance Test
3. Operational Demonstration Test

C. The Parking Program shall successfully pass each testing phase before the next testing phase commences. The LATs shall begin when the first equipment has been successfully installed; the Site Acceptance Test shall not begin until all LATs for that facility have been successfully completed; and the ODT shall not begin until all Site Acceptance Tests have been successfully completed.   Tests shall not be excluded or conducted out of sequence without prior written authorization from HMC. Successful completion will be defined as when HMC has issued written notice of acceptance of each test to the Contractor.

D. Thirty days prior to the anticipated completion of all LATs for a parking facility's implementation, the Contractor shall submit a written request for starting the Site Acceptance Test. A Site Acceptance Test shall be performed for each individual facility after all LATs for that parking facility have been successfully completed. Following successful completion of all Site Acceptance Tests, an ODT shall be conducted to assess the entire Parking Program installation as a system.

E. The Contractor shall submit the proposed Phasing Plan as outlined in the submittal guidelines. Testing shall not disrupt the normal entering and exiting of vehicles from the parking facility areas regardless if the lane is connected to the existing Parking System or the new Parking Program.

1.11   WARRANTY (HARDWARE AND SOFTWARE SUPPORT) – YEAR 1

F. The Contractor shall warranty all parts, materials, and workmanship following successful completion of the ODT for a period of 12 months. All inclusive costs (parts, labor, maintenance, warranty repairs, Contractor travel time, Contractor expenses, etc.) incurred during the warranty period shall be provided without additional cost to HMC.

G. Costs (time and material) for repair or parts replacement, components, etc., damaged or rendered unserviceable due to apparent and provable misuse, abuse, vandalism or negligence by HMC employees or the using public are excluded as a warranty item. Also excluded from the warranty are damages due to Acts of God. For services that are excluded from the warranty, the Contractor shall provide Hourly Service Rates, by type, as defined below:

1. Regular Business Hours – 5:00 AM through 9:00 PM, 7 days a week
2. Irregular Business Hours – 9:00 PM through 5:00 AM, 7 days a week
3. Holidays – All HMC-Recognized Holidays

H. HMC will not pay overtime charges.

I. The warranty period on the Parking Program shall begin when the ODT has been successfully completed and HMC has issued written acceptance

to the Contractor. The Contractor shall maintain all systems that are operating prior to starting the warranty period. Maintenance services shall be as defined within the Manufacturer's recommended maintenance procedures manual submitted with the Proposal as accepted by HMC.

J.   The Contractor shall maintain all systems throughout the warranty period. Maintenance services shall be as defined within the Manufacturer's recommended maintenance procedures manual submitted with the Proposal as accepted by HMC. All preventative maintenance shall be performed at non-peak periods during regular business hours.

Software Support during the Warranty Period: In this section Parking Program
K.   software shall refer to the proprietary Contractor's software used in the Parking Program.

1.   The Contractor shall make available to HMC normal software improvement releases (updates) when they become available. Where software problems are identified and are agreed to be minor, that is not affecting revenue, reporting, or the entry/exit or payment functionalities, these problems shall be corrected in a new software release to be available to HMC within 3 months of notification. All upgrades or improvements to software shall be documented and approved, prior to implementation. The Contractor shall correct major software problems immediately on a priority basis not to exceed 48 hours. Major software problems are defined as those causing erroneous financial transactions, revenue loss, reporting errors, loss of entry/exit functionality, loss of payment functionality, system instability, or database corruption.

2.   All software patches and updates shall be provided free of charge during the warranty period; however, HMC shall have the option of implementing the updates or not. Seven calendar days prior to all software modifications, patches, updates, and upgrades, the Contractor shall provide accurate and complete documentation that describes:

a.   patch/update release designation
b.   proposed date and time of implementation
c.   detailed description of what the patch/update accomplishes
d.   full disaster recovery procedures that return the system to its pre-patch update condition
e.   List of other installations where the patch has been previously installed, and contact information for those customers

3.   Contractor shall coordinate the testing and implementation of all patches and updates with HMC IT.

4.   Contractor shall coordinate all remote and physical access into the Host Servers with HMC IT.

5.   Contractor shall provide an off-site hosted agreement for the servers supporting the permitting solution. Should the PRCS and PCSC

systems require on-site servers, these servers shall be installed and maintained in the existing HMC computer server rooms located in the Ninth & Jefferson building or the Maling Building. Contractor shall coordinate the exact

location with HMC.

6. The Contractor shall support upgrades to their application based on operating system patch and upgrade requirements (For example, if the system runs on a Microsoft operating system, the software shall be able to be patched according to the Microsoft patch and upgrade

7. The Contractor shall support upgrades to their application based on operating system patch and upgrade requirements (For example, if the system runs on a Microsoft operating system, the software shall be able to be patched according to the Microsoft patch and upgrade

8. The Contractor shall commit to provide corrective patches and upgrades in the event security vulnerability or system availability issues are discovered within 30 days of discovery.

1.12   POST-WARRANTY SOFTWARE SUPPORT SERVICES – YEARS 2 THROUGH 5

A. The Contractor shall propose a scope of work to provide post-warranty Software Support Services similar to the services provided during the warranty period, and as described in Paragraph 1.12.C, above. Services to be described in the scope of work include, but are not limited to:

1. On-Site Software Support for both Parking Program and all 3rd party software applications
2. Remote Software Support for both Parking Program and all 3rd party applications
3. 24/7 Hotline Telephone Support

B. Proposed scope of work shall be subject to modification and ultimate approval of HMC.

C. The Contractor shall propose a total cost to perform software support services contained within the scope of work for the year following the warranty period as well as the subsequent three years (YEARS 2 THROUGH 5). These costs shall be included in the Total Proposed Base Price.

D. HMC will not pay overtime charges.

1.13   POST-WARRANTY HARDWARE MAINTENANCE SERVICES – YEARS 2 THROUGH 5 (ADDITIVE/ALTERNATE PROPOSAL ITEM)

A. The Contractor shall make components available for ten years after the Project acceptance.

B. In the event that the Contractor withdraws from the manufacture, distribution, or support of parking revenue control systems in the United States; or sunsets a hardware component, the Contractor shall provide HMC with the notice of such occurrence at least 120 calendar days in advance of withdrawal. In addition, the Contractor shall provide HMC with manufacturing specifications for all Contractor-manufactured components of the Parking Program, and HMC shall be provided the opportunity to purchase a suitable amount of spares of all discontinued components.

C. Spare Parts

    a. The Contractor shall propose a list of spare parts (type and quantity) to be maintained on site. The list of all spare parts required to maintain the system under the submitted preventive maintenance program shall be clearly identified and included in the Proposal. In addition, the Contractor shall submit a price list for the proposed spare parts inventory that lists the cost of each part on the spare parts inventory.

    b. The Contractor shall provide guaranteed component pricing for three years following Contract Award. These prices shall be valid prices for HMC to purchase the spare parts through a service agreement between HMC and the Contractor.

    c. HMC reserves the right to order additional parts and manage the spare parts inventory as required to maintain the system.

    d. The proposed spare parts list is subject to the approval of HMC, and HMC reserves the right to modify the spare parts inventory throughout the term of the Contract. HMC shall provide a storage location of the spare parts, exact location to be identified by HMC after Contract Award. The Contractor shall have access to the spare parts inventory and shall have the responsibility of ordering replacement components or parts as components or parts are used prior to completion of the warranty. Contractor shall replace used spare parts immediately upon use.

    e. All equipment and parts shall be newly manufactured within the past 6 months and never installed in any other operational system other than for factory test purposes.

    f. When delivered to the HMC, an itemized list of manufacturer's part numbers, model numbers, pricing, supplier's address, supplier's telephone numbers, and any single source components shall be identified by the Contractor.

D. **Maintenance Program**

    1. The PARCS Contractor shall establish a Revenue Control System maintenance program and submit the proposed maintenance concept in their propo program shall recognize the type and complexity of the Revenue Control System and individual items of equipment and shall not adversely impact the overall operation of

the Owner. The maintenance plan shall include monthly or annual charges for maintenance of the system over a five (5) year period with the option to renew the maintenance program on an annual basis thereafter. The Owner may, at its discretion, elect to contract with the PARCS Contractor for ongoing maintenance after the warranty period has expired.

2. Development of the Maintenance Program shall include preparation of a program plan. The Plan shall:

    a. Establish minimum acceptable equipment performance,
    b. Prepare a detailed maintenance concept document,
    c. Establish who-what-when-where maintenance responsibilities,
    d. Perform design trade-off analyses,
    e. Establish maintenance periods and schedules,
    f. Incorporate maintenance into sub-Contractor/vendor equipment and service contracts,
    g. Establish data collection, analysis, and corrective action system,
    h. Show that the required routine and corrective maintenance has been performed, and
    i. Provide for the preparation of maintenance status and performance reports.
    j. Provide for factory training for a minimum of three (3) owner personnel
    k. Provide names, addresses, and contacts for potential secondary sources of supply

3. At a minimum, the maintenance plan shall incorporate maintenance staffing, management and scheduling to be sufficient to support the Revenue Control System Host Computer, Revenue Control System Communications and the Revenue Control System Equipment and Systems for a schedule of 24 hours per day, 7 days per week (including holidays) and adhering to the Maintenance periods and not exceeding the minimum downtime or response times as defined herein. The maintenance plan shall include a schedule of personnel on site, as necessary, and personnel on-call to support the maintenance of equipment and system within the timeframes described.

4. The PARCS Contractor shall be responsible for maintaining the Revenue Control System equipment to be operational with no lane downtime for more than two (2) hours due to maintenance or equipment failure. The PARCS Contractor shall provide a sal. The maintenance telephone response within thirty (30) minutes from the original page or telephone call and the repairs shall be made with an additional two (2) hours. Repairs shall be made within the following program and schedule:

a.　　Authorization of factory trained Owner personnel to make repairs. Any such authorized repair shall not void or in any way have any adverse affect on the provided warranty of the equipment, or

b.　　Repair equipment within eight (8) hours from the initial contact by the Owner.

5.　　Each Proposer must state the number of qualified customer engineers in the Seattle, WA area. A special statement of qualification must be made addressing the background of technical support personnel trained on any of the devices in the PARCS equipment and peripheral devices. From time to time, the Successful Proposer shall permit on-site inspection of their facilities by the Owner's Auditor or designee to verify the up-to-date technical qualifications of their staff.

E.　　**Maintenance Program Plan**

The program plan shall describe how the PARCS Contractor will develop the Maintenance Program to meet the requirements of these specifications.

F.　　**Maintenance Program Review**

1.　　The Maintenance Program shall be scheduled to permit the PARCS Contractor and the Owner to review plan development. The formal review of the maintenance program shall be conducted at major program milestones. Reviews shall be conducted as an integral part of the PARCS Contractor's system engineering review and evaluation procedures. Formal review procedures shall be developed and scheduled in the Maintenance Program Plan.

2.　　As the program develops, progress shall be determined by the use of information such as predictions of maintenance problems and results of maintainability reviews and tests. The Owner shall be notified at least fifteen (15) days prior to each formal review to permit participation by the Owner. The minutes of these formal reviews shall be furnished to the Owner.

G.　　**Maintenance Concept**

1.　　The PARCS Contractor's maintenance program shall be based on predictive and preventive maintenance concepts in lieu of field maintenance practices. The object of the program shall be to limit all field work to exchanging complete items of equipment or replacement of modular components at the board level in the field.

H.　　**Maintenance Plan Development**

1. The PARCS Contractor shall submit a maintenance plan for review and approval to the Owner.

2. The plan shall address the maintenance concepts, preventive and emergency procedures, maintenance shop procedures and maintenance reporting procedures. The maintenance plan shall be submitted for approval to the Owner no less than thirty (30) days prior to the first opening date.

I.   **Maintainability Requirements**

1. The PARCS Contractor shall submit in their proposal in a form such that will facilitate the system analysis and calculations for the maintainability values of the items/systems listed herein for the Revenue Control System. Standard calculations shall be used to support the maintainability values in hours or tenths of hours for each specified system assembly or system. The PARCS Contractor shall submit the level of maintainability in terms of Mean Time Between Failure (MTBF) and Mean Time To Repair (MTTR).

J.   **Preventive Maintenance**

1. The PARCS Contractor shall develop preventive maintenance schedules designed to ensure optimum maintenance of the Revenue Control System to meet the performance standards and reliability requirements of these Technical Specifications. The proposed maintenance schedules shall be submitted as part of the maintenance plan. The PARCS Contractor shall notify the Owner when PARCS Contractor's personnel are onsite. PARCS Contractor shall maintain an ongoing log of all repairs and preventive maintenance activity. This log shall be made available to Owner personnel upon request, oral or written.

K.   **Corrective and Emergency Maintenance**
1. The PARCS Contractor shall develop a corrective and emergency schedule designed to ensure optimum maintenance of the Revenue Control System to meet the reliability and maintainability requirements. The corrective and emergency schedule shall be submitted as part of the maintenance plan. A Weekly or Monthly on-call service personnel schedule shall be provided to Parking

Operations and the Owner Communications Center.

2. The maintenance work shall be assigned on a fixed-schedule basis to meet the operational and traffic needs of the Owner. The schedule shall include seven (7) days per week, twenty four (24) hours per day. No lane shall be out of service for more than two (2) hours due to failure or maintenance of any Revenue Control System component. The maintenance work shall be coordinated and approved by the Owner prior to initiation of maintenance work.

L. **Reporting Requirements**

1. The PARCS Contractor shall maintain current and accurate records for all field and shop maintenance work. The PARCS Contractor shall prepare a service report each time service is performed for corrective or emergency work. The report shall include, but not be limited to equipment item number, location, work or service performed, reported fault, parts used and the time the service was started and completed. One copy of all service reports and records and all preventive maintenance work shall be forwarded to the Owner monthly.

2. Weekly and monthly reports shall be prepared and shall include, but not be limited to, average response and repair times, failure statistics, total down time of the equipment and other summary information for all classes of equipment.

3. The Owner shall have access to all service records at all times

1.14 CONSUMABLES

A. The Contractor shall provide HMC with receipt specifications; parking ticket specifications (front and back sides of a typical parking ticket delineating required formats; magnetic stripe or barcode location; and proposed ticket manufacturer), receipt paper stock specifications, and citations for the new system within 30 days following Contract Award. The ticket format shall be such that HMC can input their required information on the ticket and submit the revised ticket to the Contractor for review and revisions as required. An agreed upon ticket format for each facility shall be finalized within sixty days after Contract Award. Ticket stock delivery shall occur prior to or concurrent with the first equipment delivery to the HMC.

B. The Contractor shall provide a twelve month supply of receipt paper, tickets, citation stock, and all other consumables for the Parking Program to HMC upon the purchase of the system. The number of tickets that are supplied shall be based upon the number of parking transactions processed plus 50% allowance for growth

in the number of transactions processed.

C. HMC desires to not be restricted to any one particular ticket supplier. As such, ticket specifications shall be reproducible by multiple ticket manufacturers.

PART 2 – PRODUTS

2.01   SOFTWARE

A.   All software and software licensing required by the system shall be provided by the Contractor. The Parking Program shall adhere to the HMC IT Information Technology Standards. To the greatest extent possible, proven, off-the-shelf software (i.e., software already manufactured and available for delivery) shall be used. Each such software package shall be identified in the Contractor's Proposal. Unless specified elsewhere, all third party software provided by the Contractor shall be the latest available version at the time of system implementation. The Contractor shall be responsible for making any necessary modifications, and providing documentation of such modifications, to existing software programs that the Contractor adopts for the system. Should the Contractor and the software manufacturer be separate entities, the standard system software supplied shall not be modified by the Contractor in any way that shall preclude the purchase of a standard maintenance and service contract from the manufacturer. The Contractor shall purchase software maintenance for all third party software naming HMC as the software owner and contact. All third party software maintenance agreements shall remain valid throughout the duration of the warranty period and shall be extended on an annual basis according to the provisions to be negotiated and described within the post-warranty Software Support, Preventative Maintenance and Emergency Support Agreement.

B.   The Contractor shall provide perpetual licenses and/or authorization for all software used by HMC. If available, a site license shall be provided to HMC. The Contractor shall identify any and all third party software and their associated licenses in the Proposal. Licenses shall cover future updates as required by the Contract Documents for as long as the software is maintained by the third party provider. The operating systems, application software, development language, peripheral software, and hardware diagnostic software shall be licensed in perpetuity to HMC. Original CD-ROMs, DVDs, and software documentation shall be delivered to HMC prior to system acceptance testing.

C.   Database Management System

1.   Application software shall consist of software to provide complete operation of the Parking Program and include the database management system.

2.   Data recorded by the Parking Program shall be maintained in files that are in ODBC compatible formats. Solution shall support a relational database format for the storage of data based on HMC IT standards.

D.   Operating System Platform

1.   Operating system software shall consist of software to support system setup, system operation, routine hard drive backups, diagnostics, and other maintenance routines.

2.   The desktop/laptop operating system shall comply with HMC IT standards.

3.   The server operating system shall comply with HMC IT standards.

4.   Upon commercial release of a new operating system version, the Contractor shall upgrade the application to operate on the most current operating system. Upon completion of successful testing, Contractor shall recommend implementation of the patch. Implementation shall be subject to HMC's approval.

E.   Application Software

1.   Application software shall be comprised of computer application programs to provide complete operation of the Parking Program and includes the database management system. Application software shall be compatible with the operating system platform. The software programs provided shall allow for future upgrade and expansion of the system.

2.   Host Servers and workstations solution shall allow multiple groups and roles that govern individual access to the system and transactions within the system. The assignment of a group/role will determine whether or not the individual may access a transaction, and if the access is update or view only.

3.   The Contractor shall install and configure all application software and firmware required by the Parking Program with all software licenses registered to HMC.

4.   The application software shall provide the following:

a.   PA DSS validated according to PA DSS v3.0 or newer, or the latest version in effect at the time of Contract Award, and shall be upgradable to maintain current standards throughout the life of the system.

b.   Ensure that the application does not implement any changes to the Operating System that can potentially jeopardize PCI Compliance.

c.   Browser-based – Parking Program software shall be browser-based and web-browser enabled, i.e. the software shall be accessible by an authorized user through an internet browser of any workstation connected to the HMC IT network. Users shall not need a client version of the software installed on their workstations

to access the software. Access rights to the system for HMC personnel and others shall be defined during implementation.

d.   The software shall be accessible by patrons from remote computers (laptop or desktop), smartphone, tablets, and other devices that are web-browser enabled and not connected to the HMC IT network.

e.   Solution shall provide role-based access control using the principle of least privilege for all system functions including system administration and security administration.

f.   Integration with HMC's website – The Parking Program shall utilize web services to publish data in real-time to be consumed by HMC's website. Contractor shall work with HMC to design and develop the website page(s) and determine the specific information to be published. At a minimum, the integration shall accommodate:

    (1)   Patron enrollment, administration, and management of parking accounts
    (2)   Web-based invoicing
    (3)   E-payment for patron parking
    (4)   Premium parking services
    (5)   Real-time Open/Full status and graphical depiction of each public parking facility – homepage, mobile website, and mobile app
    (6)   The real-time number of available parking spaces in each public parking facility as well on each level of the parking garages – homepage, mobile website, and mobile app

g.   Automatically detect and report fault conditions through a FMS – the system shall perform a self-check on and provide notification for fault conditions and equipment failure. Fault conditions shall be categorized by severity and the system shall notify designated HMC personnel via email and or text message for any individual fault condition, category of fault, or HMC-selected group of faults. The system shall provide a continuous end-to-end self-checking.

h.   Reporting as outlined in the Audit and Reporting Subsection.

i.   Facilities monitoring of all field devices, e.g., entry station status, barrier gate status, express exit station status, cashier stations status, lane status display, Dynamic Signage status, LPR camera status, UPS unit status, etc.

j.   Allow Supervisors to authorize exceptions transactions occurring in a cashiered lane and remotely from a workstation in the parking office and other designated locations. Authorization shall require

Supervisor to enter a number/code to authorize any exception.

k.   Require Supervisors to enter name and reason for adjusting any ticket. Each use of this function shall be automatically logged in the system with date, time, and username.

l.   Allow supervisors to pull up details about exception transactions from a cashier station or a workstation during review.

m.   Central access and control of field devices – Users with the appropriate authorization shall be able to issue remote commands from system workstations to the field devices such as raising and lowering the barrier gates; rebooting the entry or exit station; putting the entry or exit station in or out of service; changing the lanes status signs; applying software patches and updates; etc.

   (1)   The use of central controls shall be logged with user ID, time, device controlled and action taken.

n.   Parking rate, grace period, and time increment changes – The parking application shall be developed to provide changes/alterations to rate structures from system workstations without Contractor involvement. The Parking Program shall remotely communicate with all devices in real-time for a general broadcast of information or software update or communicate to a single device to upload information or software. Broadcasting information such as rate changes or time increment changes shall be in real-time to all field devices. It shall be possible to remotely shutdown a field device's operating system, upload updates and remotely restart the field device. The system shall correctly process parking fees during a transition:

   (1)   from daylight savings time to standard time, and vice versa

   (2)   at the beginning of March during leap years (e.g., when there is a February 29th).

   (3)   from one rate to another (e.g., rate shall have an effective date so that patrons are charged a parking fee based upon the parking fee that was current at the entry date and time, not the exit date and time, allow the new rate to be either less than or greater than the new rate). This requirement shall apply to the parking fees as well as any tax rates or structures.

o.   The system shall charge variable rates based upon the time of day, day of week, and special events. The Contractor shall provide independent, variable rate structures for each facility.

p.   The rate structure shall be programmable to establish

daily/weekly/monthly maximum fees, grace times, and complimentary periods.

q. Create system generated alarms – System shall generate alarms for any user selectable event type. Alarm Hierarchy shall be completely configurable so that HMC can adjust priority of alarms, audible tones, where the alarms are sent, etc. Initial Alarm Hierarchy shall be coordinated with HMC during implementation.

r. All query results shall be exportable to multiple formats including comma-separated-value, Microsoft Excel©, Microsoft Access©, etc.

5. Task Scheduler – The software/system shall automatically execute tasks in an unattended method and shall include but not be limited to the following tasks:

a. Create and integrate customer tasks
b. Support execution of pre-defined tasks, including but not limited to:
    (1) Exporting data for another system
    (2) Importing data from another system
    (3) Updating records in a batch mode
    (4) Escalating fines
    (5) Generating letters and notices in printed form or email
    (6) Creating vehicle notifications
    (7) Creating boot/tow lists
    (8) Creating scofflaw lists
    (9) Creating VIP lists
    (10) Creating files for communication with handheld computers
    (11) Adding citation late fees
    (12) Closing aged parking transactions
    (13) Converting overpayments on citations
    (14) Sending commands to one, a group of, or all field equipment
    (15) Renewing permits/credentials
    (16) Resetting permit statuses
    (17) Resetting the passback status for a batch of credentials
    (18) System tasks enabling the use of permits when equipment is operating in an offline mode
    (19) System task to purge outdated database content

6. Industry standard software packages shall be utilized. Each such software package shall be identified in the Contractor's Proposal. The Contractor's Proposal shall state the purpose of the software package, where it will be used, and how it will be used. If one software package is required to interface with another software package, the interface shall be documented and supported by flowcharts or block diagrams as appropriate. The Contractor shall advise if the software used in the system will be customized or "off-the-shelf" software, and shall describe the

method of obtaining further software updates or modifications. Application software shall have been designed for use in systems, and shall be written in a standard, industry-accepted computer language such as Java, C++, Visual Basic, etc. The Contractor shall identify the version of software that will be used at HMC in their Proposal.

F.   **Audit and Reporting**

1.   The system shall document parking revenue and activity and generate revenue and activity reports. All reports shall be available online and on demand for HMC personnel who have proper password access.

2.   HMC shall establish its virtual midnight for transaction processing, credit card batch close, and report cutoff times. Establishing virtual midnight shall be a HMC responsibility that follows applicable instruction and training of HMC personnel by the Contractor.

3.   The system shall identify and produce reports that reflect separately public parking and employee parking.

4.   Public parking data shall be separated by category, including but not limited to: PPUP, Contract parking, Long Term, Hourly and Economy Parking for reporting purposes.

5.   Provide electronic event journal that can be accessed by a supervisor from a workstation during a cashier shift and following shift close to perform cashier closeout.

6.   The transactional stream of data shall be compiled in an ODBC compliant database. HMC shall prepare custom reports using this data including exporting data to Crystal Reports©, and Microsoft Excel©, at a minimum, via a comma-separated-value file format or as a PDF file.

7.   All reports shall query, filter, sort, transactions by date/time, location, ticket id, vehicle license plate number, field device unique identifier, parking fee, transaction type, exception, validation type, or cashier, at a minimum.

8.   Capture, record and report separately all exception transactions that could not be processed 100% and automatically by the system (swapped, unreadable, lost, foreign, mutilated, used, disputed fee, cancelled, credit card transactions processed in an off-line mode, etc.)

9.   Provide the Contractor's standard reports including report descriptions, selectable data fields, and report layouts for all standard reports. Contractor to submit standard reports for HMC review and approval.

10.   Contractor shall provide a definitions key for every report including a narrative description of what data each column and row represents and calculation formulas that define how all figures are obtained.

11. Develop and prepare up to 15 additional "custom" reports. The content and layout of the information in these new reports shall be dictated by HMC in consultation with the Contractor. HMC shall have up to the end of the warranty period to request the new reports. Contractor's Proposal shall include time and effort for development of the 15 custom reports. Additional details for the custom reports can be found in this file: 2015-02-25 HMC_PrkRpl_Rpts_Exct_IC & Acctg. This file will be included with the RFP.

12. The system shall support the scheduling of reports to automatically run at a desired time or on a desired schedule. Users shall be able to designate e-mail recipients for these reports. Only users with appropriate privileges shall be able to schedule reports or view scheduled reports. The details of scheduled reports, including e-mail recipient, shall be editable after scheduling.

13. The system shall utilize a report writer, such as Crystal Reports, for processing standard and ad-hoc reports. The license to Crystal Reports shall permit both running standard reports and creating custom reports. The system shall support the import of Crystal Reports template files (.rpt files). The system shall be able to execute these reports after they have been imported.

14. The Contractor shall coordinate with HMC as required during the system design to address the specific reporting needs of HMC. The system shall allow grouping of reports by category so as to simplify choosing a report from a list. At a minimum, reports provided shall include: We need to include additional specific HMC reports

    a. User Reports:
        (1) A chronological listing of citations written by violation type, parking facility location and date range.
        (2) A listing of all vehicle license plates and VINs with "X" or more unpaid citations.
        (3) Number and percent of tickets issued by violation type during a date range.
        (4) An officer-specific report containing tickets written by location, time of day, and violation type during a specific time period.
        (5) A listing of permit reservations within a specified date range, with reservations for specific events listed separately. This report shall include reservations usage detail.
        (6) Monthly accounts receivable report of tickets unpaid during specified date range.
        (7) A listing of uncollectible tickets by license plate #, with ticket #(s) and total dollar amount due.
        (8) A listing of tickets by name, address, and dollar amount

due that have aged beyond a user-defined period that can be written off and placed in history files.

(9) A detailed report of all activity for a given cash drawer on a given day by transaction type (bus tickets, parking tickets, permits, etc.). The report shall show activity for each revenue-producing transaction category.

(10) A report providing aging status for unpaid invoices. The report shall be able to be broken down by past due statuses such as current, 30 days, 60 days, 90 days, and 180 days.

(11) Custody by User Report – lists the permits in individual customer service representative's custody for inventory control purposes.

b. Shift Reports

(1) Cashier shift report
(2) Express exit station shift report
(3) Daily shift report
(4) Weekly shift report
(5) Monthly shift report
(6) Yearly shift report
(7) Cashier detail report – w/ date range

c. Monthly Reports

(1) Monthly ISF summary
(2) Monthly lost ticket summary
(3) Monthly lane load factors report
(4) Monthly exit lane summary
(5) Monthly revenue summary
(6) Monthly credit card summary
(7) Monthly cash & credit card transaction summary
(8) Monthly paid ISF summary
(9) Monthly peak occupancy report
(10) Monthly year to date transaction & revenue summary

d. Daily Reports

(1) Daily Shift Summary of (Date)
(2) Daily Credit Card Summary of (Date)
(3) Daily Revenue Summary
(4) Daily Revenue Summary (Relating to Facility)
(5) Daily Validations by Facility
(6) Daily Validations by Type
(7) Daily Validations by Department
(8) Daily Validations by Amount
(9) Daily Validations by Cashier/Issuer
(10) Daily Validations Summary
(11) Validation Detail Report – provides a chronological listing by exit

time of each validation transaction (including reservation validations not linked to an event) for each validation account for a selectable time period. Provides a sum total for each validation code.

(12) Accounts receivable and write-off reports that indicate, by user-defined receivable type, the following: total dollars collected, total citations outstanding (unpaid or partially paid), and total citations disposed by disposition type over a user-defined period (e.g. monthly, annually, etc.), and insufficient funds.

e. Credit Card Reports

(1) Detailed Credit Card Report – displays credit card revenue generated by card type, cashier station, cashier, and date/time period. The report shall include the total sum and chronological listing of each credit card transaction by card type. Credit card number shall be masked to display only the last four digits.

(2) Credit Card Summary Report – summarizes credit card transaction total for each day by credit card type for the time period selected (usually by month).

(3) A listing of credit card shift summary and occupancy counts by event at which temporary permits are sold directly from handheld devices.

(4) Credit Card Reversal/Refund Report – summarizes credit card reversals and refunds, and includes information to identify GL accounts, clerk, receipts, and override information.

(5) A listing of expiring credit card profiles for recurring credit card payments

f. Access Card Reports

(1) Active Access Card Listing
(2) Access Cards Blocking Listing
(3) Access Cards Delete Listing
(4) Access Card Expired Listing
(5) Daily Access Card Granted Entry Listing

g. Reports that allow queries over any length of time (hours or days)

(1) Occupancy (including the peak occupancy over a given timeframe)
(2) Length of stay
(3) Revenue statistics
(4) Summary report turnover – movement
(5) Summary report events
(6) Event journal

h. Gate Open Report – For manual gate raises

(1) A report noting if a gate (entry or exit) was manually opened and by whom (or who was logged on at the time). Also noting if the

gate was opened from a terminal or at the device.

i.   Lost Ticket Transactions Tracking Report (available in daily, monthly, and yearly containing the sort-able/filterable columns below)

    (1)   Exit date & time
    (2)   Transaction #
    (3)   Lost Ticket Amount
    (4)   Last name (non-case sensitive)
    (5)   First name (non-case sensitive)
    (6)   Middle initial (non-case sensitive)
    (7)   Address
    (8)   Phone #
    (9)   LPN State
    (10)   LPN
    (11)   Cashier (non-case sensitive)
    (12)   Supervisor approval (non-case sensitive)

j.   X –Reports (a report show the accrual amount collected in a set period).

    (1)   Cashier report
    (2)   Pay station report
    (3)   Daily report (0000 – 2359)
    (4)   Monthly report (first day to last)
    (5)   Yearly report (Jan1 – Dec 31)
    (6)   Individual access card usage report for at least a 6 month period
    (7)   Maintenance report specific to time & device

k.   Summary Reports

    (1)   Cashier All Transactions

        (a)   Non-specific
        (b)   Specific
        (c)   Specific with Entry Time

    (2)   Cashier Cancelled Transactions

        (a)   All Cashiers
        (b)   Specific Cashier

    (3)   Credit Card In & Out

        (a)   By Date
        (b)   With Dollar Amount
        (c)   Day, Month & Year

    (4)   Employee & Company Access Card

           (a)   Company Activity
           (b)   Card Activity
           (c)   Customer Activity
           (d)   Activity By Date/Time
           (e)   Access Card Revenue Detail
           (f)   Access Card Revenue Summary
           (g)   Monthly Activity Detail
           (h)   Monthly Activity Summary

(5)   Instantaneous (access card) presence check

           (a)   Specific areas in the garage (Nest, Terminal Direct & General)

(6)   All transactions for a specific device

(7)   Cashier Lost & Unreadable details

           (a)   2 days
           (b)   Most recent 30 days
           (c)   Ticket back details
           (d)   Cancelled

(8)   Cashier Shift Summary
(9)   Credit card transactions for cashiers
(10)   Free of charge ticket for cashiers
(11)   Insufficient Funds

           (a)   Paid transactions for cashiers

(12)   Ticket by rate

           (a)   Most recent 15 days
           (b)   Choose month
           (c)   For prior month

(13)   The Contractor shall provide the Employee Parking Lot reports below in an approved format.

           (a)   Real-Time Inventory Report
           (b)   Duration of Stay Report
           (c)   Lot Activity Report
           (d)   Lot Anti-Passback Violation Report
           (e)   Lot Revenue Report
           (f)   Online Payment Details
           (g)   Online Payment Summary

15.   Where the authorized remote address is requesting modification to the Server systems' application software, an authorization check shall be

made based on the requester's PIN. Where the change and/or update is authorized, an audit trail and report containing the following information shall be maintained:

    a.   Date/time of change
    b.   Remote access address making change
    c.   Authorization PIN code to make change (varies based on type of clearance)
    d.   Record of change made
    e.   Record of data modified or changed (prior to change)
    f.   File identities and record count

2.02   POWER

    A.   Existing power infrastructure (transformers, panels, conduits, and cabling) shall be re-used by the Contractor to support the new Parking Program system and components. HMC shall provide additional power, if necessary, prior to the installation of equipment. Contractor to coordinate with HMC to detail the necessary power required to be supplied to each lane no later than thirty (30) days before the new power is required.

    B.   It is possible that the existing cables may not be able to be reused where cables have become damaged or corroded. For this unforeseeable situation, the Contractor shall propose a cost to HMC upon discovery to install new power conduits and cabling to replace the unusable portions.

    C.   Contractor shall maintain generator back up configuration for replaced components that are currently supported by generator back up power.

    D.   The Contractor shall provide power grounding of all devices per NEC. If an isolated ground is required, there may be instances where power-conditioning equipment may be required due to the location of equipment in relation to the power distribution panel and transformers.

2.03   COMMUNICATIONS

 A.   Fiber optic communication or copper cabling will be made available at devices locations and shall be utilized by the Contractor.

 B.   In addition to the requirements in these Functional Specifications, the Contractor shall comply with the HMC Information Technology Standards Cabling Standards.
 C.   The Contractor may select specific interfaces for lane equipment, however; standard, open-architecture interfaces at the physical layer shall be utilized. Ethernet shall be utilized from the computerized Lane Controllers to the Host servers. Ethernet connectivity is required at all locations.
 C.   All Ethernet equipment and design must meet HMC IT standards.
 D.   All field component communications shall be configured in a point-to-point configuration.

2.04 EQUIPMENT AND SUBSYSTEMS

A. All computing resources, application, information management, and information distribution design and configuration are subject to the approval of HMC IT.

B. All equipment and associated materials utilized in the replacement Parking Program shall be newly manufactured. No used or refurbished equipment and associated materials shall be utilized.

C. All lane equipment performing a like function and of the same part number shall be fully interchangeable without the requirement for physical modifications (other than setting of dip switches to designate a specific function selection).

D. The Contractor shall utilize equipment that supports TCP/IP and remote monitoring of distributed units. SNMP shall be utilized for all equipment with Ethernet connections, i.e., Servers, networking equipment, lane control interface processors, etc., as well as all UPS units. SNMP shall manage the devices located on the network and permit active management tasks, such as modifying and applying a new configuration through remote modification of variables to one or more devices on the network.

E. Each field device shall be assigned a unique identifier within the system that is not shared with any other field device. Should the field device need to be replaced, the replacement field device would assume the old device's unique identifier. Contractor shall coordinate with HMC to develop the naming convention for the field devices.

F. The configuration shall provide lane autonomy such that no single point of failure of a device shall cause an operational failure of surrounding lanes. Equipment at a single lane may fail causing a shutdown of a lane; however, the failure shall not affect other lanes.

G. Application and Data Servers – Contractor shall provide a Hosted solution with the physical servers located in a secure site.

1. System Architecture

a. Server design shall comply with the HMC Standards for Computing Resources. All appropriate Server and database system documentation shall be provided for HMC's use.

b. The system shall utilize TCP/IP for data communication.

2. Parking Program Servers

a. The servers shall be designed to support stand-alone operations (distributed system with intelligent devices) as well as centralized management of the system.

b. The Servers shall contain all database software that is associated with revenue-closeout activity statistics and designated reports.

c. The application software shall be fully installed and configured on the Servers with all required system software licenses registered to HMC.

d. An appropriate mechanism shall be provided to limit access to the Servers and the accompanying data. The security functions provided by the system shall include but not be limited to:

   (1) VPN access: Firewall application access and "router" address filtering utilizing multi-factor authentication – no unauthorized, remote address shall be granted access.
   (2) Comply with NIST and FISMA standards for remote access.
   (3) Where the change and/or update is authorized, an audit trail and report shall be created including the following:

      (a) Date/time of change
      (b) Remote access address making change
      (c) Authorization PIN code to make change
      (d) Record of change made
      (e) Record of data modified or changed (prior to change)
      (f) File identities and record count

e. Contractor shall provide recommended storage capacities required for each component to support the solution.

f. The Database Server(s) shall be sufficiently configured such that the following features and functionalities are attainable:

   (1) Maintain 12 months of on-line data of all parking data. This data shall be readily accessible without any delay in processing.
   (2) Meet HMC data retention requirements as defined in the RFP.
   (3) The Database Servers' processing capacity shall be sized to process the transaction activities of the Parking Program as described in these Functional Specifications as well as capacity for handling 150% of the number of transactions (processing power, data storage, etc.,) and the operation without any degradation in system performance or processing speeds.
   (4) Long Term Storage Media –archival of all summary data for up to five years with simple retrieval.

H.	Credit Card Processing Subsystem

1.	HMC currently uses Elavon for clearing their credit card transactions. The Contractor shall include with their Proposal, confirmation that their system has a certified interface for processing credit card transactions through Elavon Services. In the future, HMC may wish to change credit card clearinghouses. As part of their Proposal, the Contractor shall provide a list of clearinghouses for which they have a certified interface.

2.	All Contractor-provided aspects of the credit card processing subsystem shall be PCI-compliant, such that no Contractor-provided product or solution will prevent HMC from achieving PCI Compliance in its parking operation.

3.	Because credit card processing is critical to the HMC parking operations, processing redundancy shall be built into the system. The Contractor shall provide a system such that processing credit card transactions shall not degrade the time allowed for positive authorizations. The system shall process and store credit card transactions at each field device that accepts credit cards while in an offline mode due to a communication loss. Specifically, every Express Exit Station and Cashier Station shall process and store credit card transactions during a communication loss regardless of where in the network the communication loss occurs. For example, if the communication cable to an exit station is unplugged inside of the Express Exit Station, that Express Exit Station shall process credit card transactions without achieving real-time authorization and shall store all transactions in a PCI-compliant manner until communication is reestablished. Once communication is reestablished, the system shall request authorization for all credit card transactions that were processed while offline. If a credit card transaction is denied, HMC shall receive notice of such denial in the revenue reports and as a posting to the Daily Event Log.

	a.	In the event that the device's offline storage capacity is filled, and the device needs to shut down, all stored credit card information shall be permanently deleted.
	b.	In the event that a device is operating in off-line mode and on UPS power, the device shall permanently delete all stored credit card information prior to shutting down in the event that the UPS battery power is depleted.

4.	Credit card authorizations shall use HMC's existing internet connection and firewall. The credit card system shall be supplied with an appropriate connection to connect the credit card servers to the communication pathway established by HMC. The system shall switch to a redundant connection for processing credit cards should HMC determine that it is necessary. Secondary internet connection shall be provided by HMC should they decide to activate the secondary connection.

5.   Where the credit card clearinghouse utilizes multiple IP addresses for clearing redundancy, the system shall be configured to send transactions to all of the available IP addresses offered by the clearinghouse.

6.   As part of their Proposal, the Contractor shall submit a flowchart diagram depicting the credit card processing subsystem architecture and the process for credit card transaction approvals.

I.   Workstations

1.   Solution shall utilize existing HMC desktop and laptop hardware.

2.   Contractor shall provide minimum recommended requirements of workstations where they differ from HMC standards.

3.   The workstations shall exclude any hardware that shall preclude the purchase of standard maintenance and service contract from the computer manufacturer, dealer, third party or Contractor.

4.   Any workstation shall be able to access any module of the system based on access rights of the user.

J.   Automated Pay Stations (Also referred to as "Pay-on-Foot") – contractor shall provide two (2) APS devices as part of this contract.

1.   Automated Pay Stations shall be installed on in the following locations, two (2) total:

   a.   Lobby at 8th Ave. entrance.
   b.   Lobby at Ninth & Jefferson building.
   c.   Alternate location: Pat Steel Building lobby
   d.   Alternate Location: Maleng Building lobby

2.   Overview

   a.   Contractor shall provide Automated Pay Stations (APS) devices that are integrated into the PARCS. Actual deployment locations will be designated by HMC. Contractor to provide the Hospital with electrical and communications requirements as a part of the proposal for the Automated Pay Station devices and HMC will provide all electrical and data communication infrastructure to support the APS devices.

3.   APS Requirements

   a.   Cash/Credit Card APS features - All APS devices shall provide the following features and functionalities:

(1)   Access door with appropriate locking system
(2)   Intercom equipped with camera that focuses on patron – identical to intercom equipment as provided elsewhere in the PARCS
(3)   Visual instructions for patrons to understand the sequence of events to complete a transaction
(4)   Color patron interface monitor
(5)   Cancel button that allows a patron to cancel a transaction once a parking ticket has been inserted. Any cash inserted shall be returned to the patron upon execution of the cancel button
(6)   Colors for the pay stations, all text, and graphics shall be configurable and approved by HMC prior to manufacturing
(7)   Integrated and on-line within the PARCS
(8)   Utilizes single-slot technology for ticket and credit card insertion and reading
(9)   ReadingEMV chip embedded cards and magnetic striped credit cards.
(10)   Camera to activate with the activation of the intercom.
(11)   Bar code reader to read either paper or electronic (smartphone) bar code.
(12)   Completing on-line, real-time credit card authorization.
(13)   Operate offline when network connectivity is interrupted
(14)   The grace time (the number of minutes between the time a ticket is paid and the time a driver exits with vehicle through exit lane) shall be parameter driven and with modification by HMC. The APS grace time shall be configurable for each parking facility.
(15)   Log when a cabinet has been opened or closed; date and time recorded in real-time on the Event Log
(16)   Receipt generation
     i.   Upon successful payment, print a receipt that includes the pay station identification number, facility identification, time and date, amount paid, and transaction number.
     ii.   Receipts for credit card transactions shall be either auto issue or by request. The configurable timeout function for receipt request shall be set for 20 seconds or until the next ticket is inserted.
     iii.   Create an alarm when the receipt paper is low

3.1   Cash/Credit Card APS features - In addition to the requirements above, the cash and credit card APS devices shall provide the following functionalities:

a.   Processing parking fee payments using multiple forms of payment, e.g., any combination of cash credit cards, EMV cards, and validations.
b.   EMV reader with ten-key PIN pad.

       c.   Four way bank note acceptor capable of accepting bills of all types in all directions with alarm when acceptor is approaching capacity

       d.   Bank note dispenser for dispensing change with alarm for when the dispenser is running low

       e.   The APS Stations accepting cash shall be designed with a note escrow that will accept and hold the currency until the transaction has either been completed or until the patron has cancelled the transaction and the APS Station has returned the notes.

       f.   The APS Stations accepting cash shall include a note recycler.

       g.   Bar Code reader for cell phones or hard copy.

3.2   Exiting with a Pre-Paid Ticket - All exit lanes shall process tickets that are pre-paid at the APS devices. Exit lanes shall calculate and process the additional fee if the patron has exceeded their grace time for exiting after paying at the APS.

3.3   Reporting – the PARCS shall contain reports for the APS devices that adhere to the requirements described these Functional Specifications.

K.   Entry Stations

1.   The Contractor shall provide 5 Entry Stations:
       a.   View Park Garage – 2
       b.   NJB – 2
       c.   PSB - 1

2.   Each Entry Station shall consist of the following components and capabilities:

       a.   Access door with appropriate tamper-resistant locking system (all entry stations keyed alike, and unique to this installation)

       b.   Single-slot technology such that all ticketing and card reading shall be from a single slot in the Entry Station's face

       c.   Issues one credit card-sized, side-striped or center striped, magnetically encoded or barcode parking ticket for each entry transaction

       d.   Entry Station ticket slot shall read an International Standards Organization (ISO) standard side-stripe magnetically encoded card such as a credit card

       e.   Entry Station shall read EMV credit cards (Chip & PIN) whether through the ticket slot or by a separate credit card reader

       f.   Inserted credit cards shall be read in all four directions

       g.   Active color matrix message screen, minimum six inch diagonal display that is easily readable in all ambient lighting conditions. Sample of this screen shall be provided with the Contractor's Bid Response

       h.   Utilize visual instructions for patrons to understand the sequence of events to complete a transaction

       i.   Issues audio voice instructions to compliment the visual instructions

      j.   Push-button ticket issue
      k.   Illuminated ticket slot
      l.   Push-button intercom integrated into the face of the Entry Station (propose VOIP intercom solution)
      m.   Retractable ticket mechanism
      n.   Uniquely encoded parking tickets printed for each specific parking area
      o.   Unique machine identification number
      p.   Computerized Lane Control and Interface Processor (LCIP) to control equipment component communications within the lane and to the Servers utilizing TCP/IP
      q.   Stand-alone capabilities for each Entry Station in the event that network communication is lost, and regardless of where on the network the communication interruption occurs. Specifically, each Entry Station shall provide offline transaction storage capacity for all transactional information for a minimum of 1,800 transactions. Credit Card In functionality shall be disabled while in an off-line mode. The lane shall automatically close in the event that the minimum transaction threshold is reached and shall remain closed until reestablishment of communications. Entry Station shall automatically upload all transaction information to the Servers once communications is restored.
      r.   Proximity Card Reader with a minimum read range of six inches integrated into the face of the Entry Station
      s.   Contactless Credit Card reader integrated into the face of the Entry Station
      t.   Bar code reader to read either paper or electronic (smartphone) bar code.
      u.   Ticket Stock Low alarm generated on FMS
      v.   Ticket Stock Out alarm generated on FMS

3.   As part of their Proposal, the Contractor shall submit shop drawings of proposed Entry Stations.

L.   Cashier Stations

1.   All cashiered lanes shall be dual-use such that they are capable of operating in a cashiered mode through the cashier station when a cashier is present or in an un-manned mode through the express exit station when a cashier is not present. The cashier station operating in un-manned mode shall operate in the same manner as an express exit lane.

2.   The Contractor shall provide 7 Cashier Stations.

      a.   View Park Garage – 2
      b.   NJB – 1
      c.   Patricia Steele – 1
      d.   8th Avenue Lobby – 2
      e.   Parking Office - 1

3.   Each cashier station shall be equipped with the following components and capabilities:

   a.   Cashier terminal (computerized device that shall operate the exit cashiering functions) with integrated credit card functionality
   b.   Ticket reader/validator that accepts ISO standard readable cards, magnetic stripe or barcode parking tickets, validations, and credit cards through the same single slot
   c.   Touch screen cashier monitor supplemented with standard QWERTY keyboard and mouse
   d.   Process all acceptable payment methods
   e.   Exit Station shall read EMV credit cards (Chip & PIN) whether through the ticket slot or by a separate credit card reader
   f.   Cashier shall be able to cancel a credit card or cash & credit card transaction before the credit card is ingested into the ticket transport mechanism
   g.   Receipt printer to produce receipts for a transaction. Duplicate receipt function shall be a user selectable feature that can be disabled if desired. Receipt printer inside cashier booth shall automatically be disabled in unmanned mode. Customers shall be given the option for a receipt for all transactions (no auto-issued receipts).

      (1)   Upon successful payment, print a receipt that includes:

         (a)   HMC address
         (b)   Receipt #/Transaction #
         (c)   Time, date and lane in/out
         (d)   Length of stay
         (e)   Parking fee
         (f)   Total amount
         (g)   Method of payment
         (h)   Amount paid
         (i)   Change Due

      (2)   HMC shall have the option to change receipts for credit card transactions to be auto issue or by request.

   h.   The system shall implement cashier booth fee displays that are easy to read, LED – type mounted on the exterior of the cashier booths.
   i.   Dual cash drawer operation (relief cashier shall operate out of their own cash drawer) with removable, lockable inserts.
   j.   Secured Switch for activating/deactivating the cashier station, such that cashiers do not have access to the switch.
   k.   Computerized LCIP to control equipment component communications within the lane and to the Servers utilizing TCP/IP.
   l.   Bar Code reader for cell phones or hard copy.
   m.   Stand-alone capabilities for each Cashier Station in the event that

network communication is lost, and regardless of where on the network the communication interruption occurs. Specifically, each Cashier Station shall provide offline transaction storage capacity for all transactional information, including storing encrypted credit card data, for a minimum of 1,800 transactions. The lane shall automatically close in the event that the minimum transaction threshold is reached and shall remain closed until reestablishment of communications. Cashier Station shall automatically upload all transaction information to the Servers once communications is restored.

(1)   In the event that the device's offline storage capacity is filled, and the device needs to shut down, all stored credit card information shall be permanently stored until the device is powered on. At that time, all information shall be forwarded to the server for processing.

(2)   In the event that a device is operating in off-line mode and on UPS power, the device shall permanently store all stored credit card information prior to shutting down in the event that the UPS battery power is depleted. Once power has been restored all information shall be forwarded to the server for processing.

n.   Cashier Station shall alert cashier when the transaction threshold is nearing allowing the cashier to prepare the lane for closure.

o.   Contactless and Swipe Credit Card reader integrated into the face of the cashier booth.

4.   As part of their Proposal, the Contractor shall submit shop drawings of proposed Cashier Stations.

M.   Express Exit Stations

1.   The Contractor shall provide 5 Express Exit Stations.
   a.   View Park Garage – 2
   b.   NJB – 2
   c.   Patricia Steele - 1

2.   Each Express Exit Station shall be equipped with the following components and capabilities:

   a.   Access door with appropriate tamper-resistant locking system (each express exit station keyed alike, and unique to this installation)
   b.   Ticket reader/validator that accepts ISO standard readable cards, magnetic stripe or barcode parking tickets, validations, and credit cards through the same single slot that shall print a patron receipt and/or a credit card voucher that requires no signature.
   c.   Exit Station shall read EMV credit cards (Chip & PIN) whether through the ticket slot or by a separate credit card reader

d. Customers shall be given the option for a receipt for all transactions (no auto-issued receipts). Receipt shall include:

  (1) HMC address
  (2) Receipt #/Transaction #
  (3) Time, date and lane in/out
  (4) Length of stay
  (5) Parking fee
  (6) Total amount
  (7) Method of payment
  (8) Amount paid
  (9) Change Due

e. HMC shall have the option to change receipts for credit card transactions to be auto issue or by request. The configurable timeout function for receipt request shall be initially set for 20 seconds or until the next ticket is inserted.
f. Capacity to hold two full stacks of receipt tickets
g. Receipt Stock Low alarm generated on FMS
h. Receipt Stock Out alarm generated on FMS
i. Active color matrix display, minimum size six inches measured diagonally, shall be readable in all lighting conditions
j. Utilize visual instructions for patrons to understand the sequence of events to complete a transaction
k. Issues audio voice instructions to compliment the visual instructions
l. Cancel button that allows a patron to cancel a transaction once a parking ticket has been inserted
m. Secured switch for activating/deactivating all lane equipment
n. A computerized LCIP to control equipment component communications within the lane and to the Servers utilizing TCP/IP
o. Stand-alone capabilities for each Express Exit Station in the event that network communication is lost, and regardless of where on the network the communication interruption occurs. Specifically, each Express Exit Station shall provide offline transaction storage capacity for all transactional information, including encrypted credit card data, for a minimum of 1,800 transactions. The lane shall automatically close in the event that the minimum transaction threshold is reached and shall remain closed until reestablishment of communications. Express Exit Station shall automatically upload all transaction information to the Servers once communications is restored.

  (1) In the event that the device's offline storage capacity is filled, and the device needs to shut down, all stored credit card information shall be permanently stored until the device is powered on. At that time, all information shall be forwarded to the server for processing.
  (2) In the event that a device is operating in off-line mode and

on UPS power, the device shall permanently store all stored credit card information prior to shutting down in the event that the UPS battery power is depleted. Once power has been restored all information shall be forwarded to the server for processing.

p. Proximity Card Reader with a minimum read range of six inches integrated into the face of the Express Exit Station

q. Contactless Credit Card Reader integrated into the face of the Express Exit Station

r. Bar Code reader for cell phones or hard copy

s. Push-button intercom integrated into the face of the Express Exit Station (propose new VOIP intercom solution) Push-button intercom integrated into the face of the Express Exit Station

2. As part of their Proposal, the Contractor shall submit shop drawings of proposed Express Exit Stations.

N. Entry and Exit Lane Vehicle Detection Device

1. Saw cut or embedded loops shall be used for entry and exit lane vehicle detection.

2. Contractor shall replace all existing loops and loop detectors.

3. Entry Lane Vehicle Detection: Entry lane vehicle detectors shall detect vehicular presence, legal entry, illegal exit, and back-out. Dual arming loops shall be provided for all public entry lanes.

4. Exit Lane Vehicle Detection: Exit lane vehicle detectors shall detect vehicular presence, legal exit, illegal exit, and back-out.

5. The loop detectors shall be dual channel detectors. The detectors shall detect the presence or transit of a vehicle over an embedded loop of wire.

6. The loop detector shall provide two channel pulse and presence outputs.

7. The loop detector shall provide separate, momentary contact closures upon detection of a vehicle, along with continuous contact closures during the period that the vehicle is detected.

8. The loop detector shall contain two fully separate, self-tuning, vehicle loop detectors and directional logic circuitry.

9. The loop detectors shall each incorporate a sensitive Tailgate Recognition System capable of resolving two automobiles within six inches of each other on a standard 2.5 ft W x 6 ft loop.

10. The loop detectors shall each operate in three separate sensitivity modes:

high, medium and low.

11.   Different sensitivity settings shall allow vehicles of varying height and size to be properly detected.

12.   The loop detector shall be fully microprocessor-based.

13.   Each detector shall continuously retune itself to its loop frequency during non-detect periods to prevent the detector from generating a false detect output due to frequency variances caused by environmental effects or other factors. Analog type detectors requiring periodic manual tuning or any type of detectors that do not retune unless a manual function is performed shall be unacceptable.

14.   The loop detector shall generate two loop frequencies. No two frequencies shall be the same. This shall minimize the possibility of detector crosstalk or interference between two detector loops mounted within close proximity. Detectors generating an identical frequency shall be unacceptable.

15.   Loop wire shall be either #16 AWG THHN or TFFN stranded wire.

O.   Barrier Gates

1.   The Contractor shall provide thirteen (13) Barrier Gates.
   a.   View Park – 4
   b.   NJB – 5
   c.   Patricia Steele – 2
   d.   Boren – 2

2.   All barrier gates referenced in these Functional Specifications shall contain the following:

   a.   Direct drive mechanism
   b.   Aluminum gate with padded arm
   c.   Electronically controlled rebound feature
   d.   Non-resettable, mechanical gate action counter mounted in the barrier gate housing
   e.   Gate arm length of ten feet
   f.   Single piece gate arm or articulated as required by height limitations

3.   Barrier gates shall have enough power/resistance to ensure they cannot manually be forced open.

4.   Barrier gates installed at the entry lanes shall remain in the closed position in an event there is a power failure and the UPS is no longer able to provide sufficient power to operate the lane.

5. Barrier gates installed at the exit lanes shall fail to the open position in an event there is a power failure and the UPS is no longer able to provide sufficient power to operate the lane.

6. As part of their Proposal, the Contractor shall submit shop drawings of all proposed barrier gates.

P. Lane Open/Closed Signs

1. The Contractor shall provide 9 Lane Open/Closed Signs.
    a. View Park – 4
    b. NJB – 3
    c. Patricia Steele – 2

2. Lane Open/Closed Signs shall be LED type with the word "OPEN" in green letters and the word "CLOSED" in red letters. Details for additional text or graphics shall be discussed with and approved by HMC. Lane Open/Closed Sign shall be easily readable in all ambient lighting conditions from a distance of 200 feet and a minimum viewing angle of 120 degrees.

3. The message displayed by the Lane Open/Closed Sign shall be controlled automatically by the entry/express exit station. When the entry station is in operation, the Lane Open/Closed Sign shall automatically be set to "OPEN". When the entry/express exit station is out of operation the Lane Open/Closed Sign shall be automatically set to "CLOSED". When the entry/express exit station is set into a maintenance mode, the Lane Open/Closed Sign shall automatically be set to "CLOSED".

4. For public entry lanes, the Lane Open/Closed Signs shall be Daktronics Series DF-1052, DF-2052 or equal. Proper sign matrix size shall be proposed by the Contractor to fit within the geometric circumstances of each location. Minimum character height shall be 5".

5. As part of their Proposal, the Contractor shall submit shop drawings of the proposed Lane Open/Closed Signs.

Q. Uninterruptible Power Supplies
1. Conditioned/emergency power through the TCP/IP-enabled UPS units shall be provided for the following components and facilities to protect components from loss of power, power spikes, and power sags:

    a. Public entry lanes
    b. Public cashiered exit lanes
    c. Public express exit lanes

2. UPS battery back-up for all lanes shall be sized to last sixty (60) minutes.

3. An on-line, solid state UPS shall provide both backup power and transient surge protection as defined as necessary by the CBEMA. The Contractor

is alerted to the fact that there are a number of power distribution panels providing electrical service HMC wide. The Contractor shall be responsible for providing the UPS backup requirements for each of the locations where UPS backup is required, based upon the equipment that is actually being supplied by the Contractor. HMC shall review and approve the UPS units to be provided by the Contractor. The Contractor shall test all UPS system components during the LATs and Site Acceptance Tests for each parking lane/facility. The UPS shall be sized with 50% spare capacity. This shall facilitate 30% expanded load with an 80% continuous load factor.

4. A single UPS unit, appropriately sized, shall support all devices at an individual entry lane or exit lane with the exception of cashier booth HVAC units. UPS units that supply conditioned and back-up power to multiple components are required to minimize maintenance.

5. All UPS units shall be SNMP compatible to allow automated notification when battery power is activated or the battery levels become critically low. On-line communication using an appropriate UPS monitoring software application shall be provided on one or more workstations with user selectable options to view the status of each individual installed UPS unit. At a minimum, the monitoring software shall display the operational status of each UPS unit (line/battery, online/offline) and generate alarms in the event the UPS unit's battery power is activated, becomes low or is completely exhausted.

6. As part of their Proposal, the Contractor shall submit shop drawings of all proposed UPS devices and UPS monitoring software. Included in the UPS shop drawings shall be the manufacturer's recommended battery refresh cycle.

R. Proximity Card Access System

1. The Contractor shall provide a turnkey proximity card access system that shall provide the following features and capabilities:

    a. Contractor shall install proximity card readers to support the following cards:
       (1) 125 KHz HID proximity cards
       (2) 13.56 KHz proximity cards (Husky Cards)

    b. HMC and HMC employees shall be able to utilize the system for ingress and egress to/from their dedicated parking facilities.

    c. HMC and HMC staff and maintenance crewmembers shall be able to utilize the system for ingress and egress to/from authorized parking facilities as necessary.

    d. HMC shall issue and register proximity cards. HMC shall be able to create 1000 user groups or categories of proximity cards, at a

minimum.

e.   Supervisors shall view and program proximity card privileges and access rules. The Proximity Card Access System shall provide for expiration of account/proximity card for unpaid fees; also, imposition of late fee at user-programmable intervals.

f.   The Contractor shall provide HMC with the appropriate tools to program and/or encode proximity cards from one or multiple workstations.

g.   All proximity cards shall have a mill thickness equal to that of a standard credit card.

h.   System shall have anti-passback capabilities that can be turned on or off at HMC's discretion.

i.   System shall incorporate compound anti-passback functionality to control nested areas within the parking facilities, i.e. the system shall enforce in-in-out-out card usage. Once inside a parking facility, the system shall establish a configurable amount of time in which the cardholder must enter the nested area. Should the configurable amount of time be exceeded before the patron enters the nested area, then HMC shall have the option to invoke one or any combination of the following:

(1)   Deny access to the nest
(2)   Allow access to the nested area, but generate an alarm for the event within the Parking Program
(3)   Assess a violation to the patron's account
(4)   Apply a time-dependent parking rate to the transaction (standard of special parking rate) that must be satisfied at a public exit lane before exit is permitted
(5)   Apply a flat fee parking rate to the transaction that must be satisfied at a public exit lane before exit is permitted

j.   The system shall report the occupancy of proximity card patrons in each facility, in real-time.

k.   All user group parameters and rules shall be accessible and changeable by HMC via a Graphical User Interface (GUI) accessible on any of the workstations provided with the system. Software code changes shall not be required to edit user group parameters and rules.

l.   User groups and individuals within the user groups shall each be assigned access privileges based upon facility, date, day of week, time of day, or any combination thereof. For example, it shall be possible to set an employee's access privileges to allow access to

the Employee Parking Lot valid only Monday – Friday from 8:00 AM – 5:00 PM. It shall also be possible to modify user groups or individual accounts to be exempt from anti-passback rules.

    m.   The system shall encode and control proximity cards that allow universal access to one, multiple, or all facilities depending on parameters that are input.

    n.   The proximity card management system shall provide full accounting functions including account generation, tracking, invoicing, and account payment collection.

    o.   The system shall provide an online billing and payment option for proximity cardholders to make payments through HMC's website.

2.   As part of their Proposal, the Contractor shall submit shop drawings of all proposed Proximity Card Readers.

3.   Public Entry and Exit Proximity Card Readers

    a.   Proximity card readers shall be installed on all public Entry Stations, all Express Exit Stations, and in all Cashier Booths, 15 total.
    (1)   View Park – 4
    (2)   NJB – 5
    (3)   Patricia Steele – 3
    (4)   Boren – 2
    (5)   Parking Office - 1

    b.   Proximity card readers located at the public entry and exit lanes shall have the following features and capabilities:

    (1)   Integrated into the respective entry or express exit station, e.g. not mounted on a separate pedestal
    (2)   Minimum read range of six inches

4.   Proximity Cards

    a.   The Contractor shall provide 5,000 blank proximity cards that meet the requirements of the proximity card readers being provided.

S.   Parking Space Count System (PSCS)

1.   The Contractor shall design and implement PSCS software and infrastructure.

2.   The PSCS shall be integrated into the system such that the available parking spaces within the system (based upon a differential count

between entries and exits) and available spaces within the PSCS are the same. The PSCS shall consist of the detectors located on each parking structure level and at each entry/exit lane (from the system) for detecting vehicular movements relative to entering and exiting a parking level or facility. The PSCS shall obtain count impulses from the detectors used by the parking facilities' entry and exit lanes or detection devices placed at ramp access locations between the parking structure levels.

3. The vehicle count inputs shall be transmitted to the Servers that shall process the data on a real-time basis. The processing shall consist of adding, subtracting, and comparing the respective vehicle counts against a predetermined number of parking spaces within each parking level of the parking structures or surface lots.

4. The PSCS shall provide the following:

   a. Automatic and manual control of the status of the space count signage
   b. Automatic update of the number of parking spaces available on dynamic signs every ten seconds; frequency of update up to 30 second intervals shall be configurable by HMC
   c. Long term maximum and minimum counts for each parking level or facility
   d. Hourly flow rates through entries and exits
   e. Control of the level count dynamic signs on each parking level or facility (facilities shall be considered "FULL" when the number of available parking spaces is less than a predetermined number that is adjustable by HMC). HMC shall manually modify the messages being displayed by overriding the displayed number of available parking spaces. This override shall not affect the system's actual count of the number of vehicles on the level.)
   f. Receipt of input signals from the entry and exit lanes for valid entries and exits;
   g. Receipt of input signals from vehicle detection devices with bi-directional logic at vehicle count points on the ramps between the various levels of the parking structures; (non-loop)
   h. Control of the Dynamic Signage that supports the PSCS;
   i. The Contractor shall design, furnish and install any additional infrastructure that the PSCS requires.
   j. All mounting hardware for Dynamic Signage and Vehicle Detection Devices that are part of the PSCS including any overhead mounting structures required on the ramps ascending to and descending from the roof levels of the parking structures shall be provided by the Contractor.
   k. Integration with HMC's website to upload parking availability in real-time for public viewing.

5. The PSCS shall be fully automated with no HMC intervention required under normal operating circumstances. While in operation, there shall be allowances for manual adjustments and override of the PSCS via the

workstations, including but not limited to:

a. establishing the initial number of parking spaces on each level of the parking garages and within each parking facility;
b. setting parking space variance values;
c. manual control of all parking space count dynamic signs; and
d. adjustment of the number of spaces available on each parking level and within each parking facility.

6. Workstation Functions

a. All data required to monitor, and adjust the PSCS shall be available on system workstations. The PSCS workstation functionality shall be made available on all authorized workstations. The screen formats shall be designed for the HMC's parking configurations (layout). All screen formats for the PSCS purposes shall reflect the physical layout of the HMC's parking facilities for ease of associating the displayed data with physical conditions. The Contractor shall submit proposed screen layouts for the PSCS for approval 30 calendar days prior to system implementation. Any change in the configuration screen formats shall be subject the submittal approval process.

b. Workstation application shall include the following:

(1) GUI, real-time graphical displays of the parking structures (by level and facility) and the surface lots with both the number of available parking spaces and spaces occupied (immediate user identification of count status). Red = Full; Yellow = Approaching Capacity; and Green = Spaces Available;
(2) Alarms to Parking Management to notify when a facility is "FULL";
(3) Alarms to Parking Management for component failures;
(4) User access levels with password restrictions, rights, and privileges;
(5) Operating status of all dynamic signage, including message currently being displayed;
(6) Display of summary statistics of parking space availability by specified date/time period.

c. HMC shall determine the initial number of vehicles that a parking level or parking facility will accommodate. It shall be possible for HMC to adjust the total parking spaces for each parking level and parking facility as a whole.

d. In the event vehicles continue to enter a parking level or surface parking lot after the "FULL" sign is activated, a warning indicator on a workstation's display shall be activated. This indication shall cause the PSCS to record negative parking spaces occupied

should the facility's capacity be exceeded. As vehicles exit a parking level or surface parking lot, the negative spaces occupied shall decrease until the spaces occupied is less than the designated full number.

    e.   It shall be possible to inventory a parking level or surface lot and provide an exact count of the vehicles on a parking level or surface lot. Provisions shall be included to manually adjust count information into the PSCS.

7.   PSCS Design Requirements

    a.   The PSCS shall be designed and manufactured to accommodate all parking spaces within all parking garages and surface lots that are part of this project regardless of how those spaces are assigned. The central controller shall have sufficient input-output ports and interfaces to receive the inputs, communicate with, and control all detectors, status signs and other devices for all parking facilities. The system shall incorporate capacity for space control and detection of a 150% expansion of the number of parking spaces and ingress/egress points.

8.   Operational Procedures

    a.   "Vehicle Count" shall be the number of vehicles located in a parking facility or level within a parking structure. "Spaces Available" is defined as the unoccupied spaces on any given level or facility resulting from the number of vehicle counts affecting the space availability of any specific level, facility, or surface lot.

    b.   For all parking garages, the facility count and the level counts shall be maintained independently in the PSCS. The system shall not be designed such that the facility count is derived by adding all level counts together. The facility count shall only be affected by entries and exits into and out of the parking structure.

    c.   For each parking facility, the system shall receive input from the system at each entry lane. As a vehicle enters a parking facility, a valid entry event shall cause a signal to be dispatched to the PSCS software. The PSCS shall record the event and decrement by a count of one, the number of available parking spaces and increment by a count of one, the vehicle count for the respective facility. At an exit lane, a valid exit event shall cause the number of available spaces within the parking facility to increment by one, and the vehicle count for the facility to decrement by one. For the parking garages, the number of available spaces for the level at which the vehicle entered shall also be decremented by one as the vehicle enters the level, and the vehicle count for the level shall increment by a count of one. As the vehicle exits the level, the number of available spaces for the level shall increment by

one, and the vehicle count for the level shall decrement by one.

9. Parking Space Count System Hardware

a. A critical element of the PSCS is accurate detection of vehicles. Due to the inherent inaccuracies associated with in-pavement loop detectors, the Contractor shall propose in their Proposal the use of advanced vehicle detection technologies such as video analytics, ultrasonic, infrared, and microwave. In-pavement loop detectors are only to be used in entry and exit lanes. Surface mounted loop detectors that are applied to the slabs with an adhesive strip shall be unacceptable.

b. The Contractor shall provide traffic delineation on the level to level ramps within all parking structures to force vehicles to pass through the intended non-loop count zone in a valid movement. Traffic delineation shall include but may not be limited to water-filled or concrete jersey barriers, metal pipe bollards, speed bumps, polyethylene surface-mounted guide posts, static signs, and traffic paint. Traffic delineation at each count zone shall force the approaching vehicles to drive through the intended count zone of the non-loop vehicle detector in a manner that maximizes the count accuracy for the zone. Traffic delineators shall be painted and marked in bright colors such as traffic yellow or construction green. Count zones shall be signed with static signs, provided by the Contractor, that warn the approaching vehicles of the count zone and the intended vehicle path.

c. As part of their Proposal, the Contractor shall submit shop drawings of all proposed PSCS ramp vehicle detection devices and ramp traffic delineation plan.

d. All PSCS dynamic signs shall be LED type. The sign types include:

(1) Facility Open/Full Sign – dynamic signs on approach roadways or at entry plazas that depict the status for each facility by displaying "OPEN" in green or "FULL" in red

(2) Facility Summary Level Status Sign – signage at the entry to a parking garage that depicts the available spaces for each level in the parking garage in green numbers or displays "FULL" in red

(3) Individual Level Status Signs – signage on the approach to each level from the ascending/descending ramp that depicts available spaces for each level of a facility in green or displays "FULL" in red

e. For the PSCS, the dynamic signage shall be Daktronics Series DF-1052/DF-2052/DF-2053, or equal. Proper sign matrix size shall be proposed by the Contractor to fit within the geometric

circumstances of each installation. Minimum character height shall be as follows:

(1)   Facility Open/Full Signs – 8"
(2)   Facility Summary Level Status Sign – 5"
(3)   Individual Level Status Signs – 5"

f.   The PSCS software shall control the message that is displayed on all signs.

g.   The PSCS shall allow HMC to override the status displayed and to change the predetermined occupancy number that triggers a change from one sign display to another displayed status.

h.   As part of their Proposal, the Contractor shall submit shop drawings of all proposed PSCS Dynamic Signage.

T.   Intercom System

1.   The Contractor shall provide a turn-key intercom system that consists of two host intercom stations and an integrated microphone and speaker in each Entry Station, Express Exit Station, and Employee Parking Proximity Card Reader Pedestal.

2.   The intercom shall be a push-button intercom such that in the event a patron needs assistance while stopped in a lane, the button can be pushed and a connection established between the field location and the host intercom station.

3.   In the event that the arming loops are triggered for a configurable amount of time with no transaction being initiated, the intercom station in the lane shall automatically call the Parking Administration Building.

4.   The intercom system shall utilize VOIP or a typical copper phone line.

5.   The intercom communications shall be directed to the HMC Security Services Dispatch office located in the Center Tower with roll over capabilities to a second base station as designated by HMC. The Security Services Dispatch office shall be equipped with an intercom base station that displays the physical location of the incoming intercom call.

6.   Once activated, two-way communication shall be possible and the intercom line remains open until the parking staff member terminates the call.

7.   It shall be possible that if one intercom is open, and a second call comes in, the attendant shall be able to place the first call on hold and answer the second call.

8.   As part of their Proposal, the Contractor shall submit shop drawings of the intercom base station and push button intercom terminals.

2.05   PATRON PROCESSING PROCEDURES FOR LOCATIONS WITH PARCS EQUIPMENT

A. Public Entry Procedures

1.   The following shall take place for all entry events:

a.   When the entry lane arming loops are not activated, the screen shall display the Harborview Medical Center logo, date, and time.
b.   When the vehicle activates the arming loops, the message on the Entry Station's display shall read, and a female audible voice shall sound, "Insert or Present Credit Card or Press Button for Ticket".
c.   Upon clearing the barrier gate's closing detector, the barrier gate arm shall lower to the closed position and reset the lane for a subsequent transaction.
d.   The barrier gate's mechanical counter shall increment by a count of one.
e.   The entry event shall be validated and the associated data with the entry event shall be stored.
f.   The Parking Space Count System shall decrement the number of available spaces by a count of one from the appropriate facility, Hourly Parking or Long Term Parking.

2.   Transaction specific procedures are required in addition to those listed above. The transaction specific entry procedures and procedures for abnormal events are detailed below.

3.   Normal Entry with Ticket

a.   When a patron presses the ticket issue button, no other entry method is allowed at that point and the Entry Station shall issue a uniquely numbered parking ticket while an audible signal shall sound. The Entry Station shall dispense a magnetically encoded or bar code imprinted parking ticket and print on the ticket the year, month, date, entry time (hour/minute/second), facility code, lane number, entry sequence number, unique transaction number, and unique machine number. Abbreviations are acceptable; time stamps shall be in 24-hour, military time.

b.   When the printed/encoded ticket is extracted from the Entry Station, the audible signal shall cease and the display shall read and a female audible voice shall sound "Welcome to HMC ". The barrier gate shall rise to the open position, allowing the vehicle to enter the parking facility.

4.   Normal Entry with a Mag-Stripe Credit Card (Credit Card in)

a. When a patron presents a credit card as their entry credential, no other entry method is allowed at that point and the Entry Station shall read the credit card and verify that the card is valid. The card is returned to the patron through the Entry Station's ticket throat (if magnetic striped) and an audible signal sounds.

b. After the patron retrieves their credit card, the audible signal shall cease, and the display shall read, and a female audible voice shall sound, "Please Insert Same Credit Card at Exit". The barrier gate shall rise to the open position, allowing the vehicle to enter the parking facility.

c. The card's presence shall be set to present in facility.

5. Normal Entry with a Contactless Credit Card (Credit Card In)

a. When a patron presents a contactless credit card as their entry credential, no other entry method is allowed at that point and the Entry Station shall read the credit card and verify that the card is valid.

b. After the contactless credit card is verified, the display shall read, and a female audible voice shall sound, "Please Present Same Card at Exit". The barrier gate shall rise to the open position, allowing the vehicle to enter the parking facility.

c. The card's presence shall be set to present in facility.

6. Back out at Entry

a. If a patron pushes the ticket issue button and backs out of the lane without retrieving the ticket the barrier gate shall remain closed and the ticket shall be retracted and retained in the Entry Station. The ticket shall be invalidated by the entry station and within the system to prevent future use. The back out entry event shall be stored in the system and the lane shall reset for a subsequent transaction.

7. Stolen Ticket at Entry

a. If a patron pushes the ticket issue button, retrieves the ticket, and then backs out of the lane the barrier gate shall automatically return to the closed position (no timed delay to lower the barrier gate arm to the closed position shall be acceptable), the ticket shall be invalidated within the system, and an alarm shall be generated. The stolen ticket entry event shall be stored in the system. The ticket shall be electronically invalidated and shall not be allowed to be processed at any exit.

B. Express Exit Lane Procedures

1. The following shall take place for all normal exit transactions at an Express

Exit Lane:

a. As the vehicle approaches the Express Exit Lane, the patron shall see the dynamic signage with the appropriate message and/or graphics displayed. Exact messages to be displayed shall be determined by HMC during installation.

b. When the Express Exit Lane arming loops are not activated, the patron's display screen in the Express Exit Station shall display the Harborview Medical Center's logo, date, and time.

c. After activating the arming loops, the display reads, and a female audible voice sounds, "Insert or Present Credit Card Used at Entry or Insert Ticket".

d. After the appropriate entry credential is presented, the display reads, and a female audible voice sounds, "Insert or Present Credit Card for Payment". For CCI/CCO transactions, the credit card authorization begins automatically. For CCI/CCO transactions, once the parking fee is calculated, the parking fee shall be displayed on the Patron's Display.

e. The patron inserts or presents a credit card.

f. During credit card authorization, the display shows the message "Processing, Please Wait".

g. Once payment is obtained the card, if inserted, is returned through the ticket slot and the display reads, and a female audible voice sounds, "Please Take Credit Card".

h. Card is removed, the station gives the option to print the patron receipt, if selected the display reads, and a female audible voice sounds, "Please Take Receipt", and the station produces an audible "beep".

i. Receipt is taken, audible "beep" ceases, the display reads, and a female audible voice sounds, "Thank you", and the barrier gate rises.

j. Vehicle crosses the closing loop, the barrier gate closes, and the lane resets for the next transaction.

k. The barrier gate's mechanical counter increments by a count of one.

l. The ticket is moved from active ticket inventory to inactive ticket inventory, and the PSCS increases the number of available spaces by a count of one for the appropriate facility, Hourly or Long Term Parking.

2. Transaction specific procedures are required in addition to or in place of those listed above. The transaction specific exit procedures and procedures for abnormal or unique events are detailed below.

3. Express Exit - Invalid Credit Card Presented for Payment

a. After fee is displayed, an invalid credit card is inserted or presented and the display shows the message "Processing, Please Wait".

b. Once authorization is declined, the credit card, if inserted, is returned through the ticket slot and the display reads, and a female

audible voice sounds, "Your Card Was Not Accepted, Please Try a Different Credit Card or Press the Intercom for Assistance".

    c.   After the invalid credit card is removed, if inserted, the ticket remains in the Express Exit Station and the display alternates between displaying the fee and the message "Insert or Present

    d.   Once the patron presents a valid credit card for payment, the transaction continues as a normal exit transaction.

    e.   If the patron does not have a valid credit card, they must push the intercom for assistance.

8.   Express Exit - Exit Within Grace

    a.   Patron inserts their parking ticket and a zero dollar fee is displayed and the barrier gate rises. The display reads, and a female audible voice sounds, "Thank you".

    b.   Once the gate rises, the transaction continues as a normal exit transaction.

9.   Express Exit - Lost Ticket Transaction

    a.   The patron pushes the intercom button and is connected to a supervisor. After the patron informs the supervisor that they have lost their ticket, the supervisor selects "lost ticket" which automatically transmits the entry information to the Express Exit Station.

    b.   The correct fee is calculated and displayed.

    c.   The display reads, and a female audible voice sounds, "Insert or Present Credit Card for Payment".

    d.   After payment is received, the Express Exit Station generates an exception ticket for a lost ticket and retains the exception ticket.

    e.   The station prints a receipt, if selected, and the transaction continues as a normal exit transaction.

10.   Express Exit - Unreadable Ticket Transaction

    a.   Ticket is inserted into the ticket slot. The ticket cannot be read by the Express Exit Station and is returned through the ticket slot. The display reads, and a female audible voice sounds, "Ticket Unreadable, Press Intercom Button for Assistance".

    b.   The patron pushes the intercom button and is connected to a supervisor. After the patron informs the supervisor that their ticket is unreadable, the supervisor selects "unreadable ticket" which automatically transmits the entry information to the Express Exit Station. The correct fee is calculated and displayed. The display reads, and a female audible voice sounds, "Insert or Present Credit Card for Payment".

    c.   After payment is received, the Express Exit Station generates an exception ticket for an unreadable ticket and retains the exception ticket.

    d.   The station prints a receipt, if selected, and the transaction

continues as a normal exit transaction.

11.   Express Exit - Attempt to Exit with Stolen Ticket

    a.   Stolen Ticket is inserted into the ticket slot, the ticket is identified as a Stolen Ticket, appropriate alarm generated by the system, and the message "Ticket Invalid, Press Intercom Button for Assistance" is displayed.

    b.   The patron presses the intercom button and the supervisor verifies (via the stolen ticket alarm) that the transaction is a stolen ticket.

    c.   From the workstation, the supervisor selects "lost ticket" which provides a screen for the supervisor to enter the appropriate entry transaction information and transmits the entry information to the Express Exit Station. The correct fee is calculated and displayed and the Stolen Ticket is retained by the Express Exit Station.

    d.   After fee is displayed, the transaction continues as a normal transaction.

12.   Express Exit - Exit with Validation

    a.   After fee is displayed, a validation ticket is inserted into the ticket slot or the patron's re-encoded parking ticket is inserted into the ticket slot and the discount is applied to the parking fee due based on type of validation (either dollar value or time value).

    b.   The display updates to show the reduced fee due.

    c.   If the entire fee due is validated, then the barrier gate rises and the transaction continues as a normal exit transaction.

    d.   If the validation does not satisfy the entire parking fee, the patron must present a credit card to complete payment and the transaction continues as a normal exit transaction.

C.Cashiered Exit Lane Procedures

1.All transactions processed at a Cashiered Exit Lane in unmanned mode shall follow the same procedures as those for transactions at an Express Exit Station described above.

2.   The cashier drawer shall only open for those transactions that require cashier intervention (i.e. cash transactions, check transactions, etc.). For those transactions that do not require cashier intervention (i.e. credit card transaction, grace ticket, full validation transaction, etc.) the cashier drawer shall remain closed.

3.   Normal transactions at a Cashiered Exit with a cashier present shall follow the procedures described below.

    a.   As the vehicle approaches the Cashiered Exit Lane, the patron shall see the dynamic signage with the appropriate message and/or graphics displayed. Exact messages to be displayed shall be determined by HMC during installation.

b. When the arming loops are not activated, the screen shall display the HMC logo, date, and time.
c. After activating the arming loops, the display alternates between "Insert Ticket" and "Or Insert/Present Credit Card Used at Entry".
d. When the appropriate entry credential is presented, the patron fee display and cashier terminal displays the fee due.
e. After the parking fee is satisfied the receipt is printed through the cashier terminal receipt printer, if requested, patron receives their receipt, and the barrier gate rises.
f. When the vehicle crosses the closing loop, the barrier gate closes and the station resets for the next transaction.
g. The barrier gate's mechanical counter increments by a count of one.
h. The ticket is moved from active ticket inventory to inactive ticket inventory, and the PSCS increases the number of available spaces by a count of one for the appropriate facility.

4. Transaction specific procedures are required in addition to or in place of those listed above. The transaction specific exit procedures are detailed below.

5. Cashiered Exit with a Ticket – Credit Card Payment

a. The patron presents their parking ticket to the cashier who inserts the patron's parking ticket into the in-booth ticket reader/validator.
b. The patron informs the cashier that their payment will be via credit card. Once the parking fee has been calculated and displayed on the patron fee display, the patron shall present their credit card to the cashier who shall insert the credit card into the ticket reader/validator.
c. Once authorization is obtained the card, if inserted, is returned through the ticket slot.
d. After the card is removed, the cashier terminal receipt printer prints the patron receipt, if requested.
e. The cashier gives the patron the receipt, and presses the button confirming that the patron has received their receipt.
f. After the cashier presses the button confirming that the patron has received their receipt, the barrier gate rises and the transaction continues as a normal exit transaction.

6. Cashiered Exit with a Ticket – Cash
    After the parking fee is displayed, the following procedures apply:

a. For cash transactions, the cashier presses the Cash button on the cashier terminal and inputs the amount received from the patron. The cash drawer opens and the change due to the patron is displayed on the patron fee display and the cashier terminal.
b. If selected, the receipt is printed on the cashier terminal and the cashier gives the receipt to the patron and closes the cash drawer.

      c.   After the cash drawer is closed, the barrier gate rises and the transaction continues as a normal exit transaction.

7.   Exit with a Credit Card (Credit Card Out)

      a.   After approaching the cashier operating window, the patron presents their credit card used at entry to the cashier. The cashier inserts the parking ticket into the in-booth ticket reader/validator. The correct fee is displayed on the patron fee display and the cashier terminal.

      b.   Once authorization is obtained the card, if inserted, is returned through the ticket slot to the cashier. A message is displayed on the cashier terminal to inform the cashier that the payment was successfully processed.

      c.   After the card is removed, the cashier terminal receipt printer prints the patron receipt, if selected, and a button appears on the cashier terminal to confirm that the patron has received their receipt.

      d.   The cashier gives the patron the receipt, and presses the button confirming that the patron has received their receipt.

      e.   After the cashier presses the button confirming that the patron has received their receipt, the barrier gate rises and the transaction continues as a normal exit transaction.

8.   Invalid Credit Card Presented for Payment

      a.   After the parking fee is displayed, an invalid credit card is inserted or presented by the cashier and the display shows the fee due and the message "Processing, Please Wait".

      b.   Once authorization is declined, the credit card, if inserted, is returned through the ticket slot to the cashier and the message "Card Not Accepted, Please Try a Different Credit Card" is displayed along with the fee due. The cashier informs the patron that their credit card is invalid and requests a different credit card.

      c.   Once the patron presents a valid credit card for payment to the cashier, the transaction continues as a normal exit transaction.

9.   Exit Within Grace

      a.   The ticket or credit card used at entry is presented and a zero dollar fee is displayed on the patron fee display and the cashier terminal.

      b.   A message is displayed on the cashier terminal to inform the cashier that the ticket is a grace ticket and a button appears to confirm the transaction.

      c.   After the cashier presses the button confirming the transaction, the barrier gate rises and the transaction continues as a normal exit transaction.

10.   Lost Ticket Transaction

a. The patron informs the cashier that they have lost their ticket and the cashier presses a lost ticket button on the cashier terminal. Cashier asks for entry transaction information and manually inserts that data into the cashier terminal. The correct fee is calculated and displayed on the patron fee display and Cashier Terminal and the transaction continues as a normal exit transaction.

b. An exception ticket is generated for the lost ticket and retained for audit purposes.

11. Unreadable Ticket Transaction

a. Ticket is inserted into the ticket reader/validator by the cashier, the ticket cannot be read and is returned through the ticket slot. The message "Ticket Unreadable" is displayed on the cashier terminal.

b. Cashier presses an unreadable ticket button on the cashier terminal. The cashier is prompted to manually enter the unique identification number from the entry ticket.

c. After the entry information is manually entered the correct fee is calculated and displayed on the patron fee display and Cashier Terminal and the transaction continues as a normal exit transaction.

d. An exception ticket is generated for the unreadable ticket and retained along with the original unreadable ticket for audit purposes.

12. Exit with a Discounted Fee

a. After fee is displayed, the cashier presses the appropriate discount key on the touch screen. The discount is applied to the parking fee due based on type of discount.

b. The display updates to show the reduced fee due.

c. If the entire fee due is discounted, then the barrier gate rises and the transaction continues as a normal transaction.

d. If the discount does not satisfy the entire parking fee, the patron must present an acceptable form of payment and the transaction continues as a normal transaction.

13. Attempt to Exit with Stolen Ticket

a. Stolen Ticket is inserted into the ticket reader/validator slot by the cashier, the ticket is identified as a stolen ticket, appropriate alarm is generated by the system, and the message "Invalid Ticket" is displayed on the cashier terminal.

b. Cashier presses an invalid ticket button on the cashier terminal. A supervisor verifies (via the stolen ticket alarm) that the transaction is a stolen ticket.

c. From the workstation, the supervisor selects "lost ticket" which automatically transmits the entry information to the Cashier

Station. The correct fee is calculated and displayed.

    d.   An exception ticket is generated and is retained along with the stolen ticket for audit purposes.

    e.   After payment is received the transaction continues as a normal exit transaction.

14.   Exit with a Validation

    a.   After fee is displayed, a validation is inserted into the ticket reader/validator slot by the cashier and the discount is applied to the parking fee due based on type of validation, either dollar value or time value.

    b.   The display updates to show the reduced fee due.

    c.   If the entire fee due is validated, then the barrier gate rises and the transaction continues as a normal transaction.

    d.   If the validation does not satisfy the entire parking fee, the patron must present an acceptable form of payment to the cashier and the transaction continues as a normal exit transaction.

D. Proximity Card Procedures

1.   Proximity Card Entry: Public Entry Lane

    a.   When the vehicle activates the arming loops, the message on the Entry Station's color display shall read and a female audible voice shall sound "Please Press button for Ticket or Insert/Present Credit Card"

    b.   When an authorized proximity card is presented, the proximity card reader shall emit an audible "beep" to confirm that the card is read and a green light shall blink on and then off. No other entry method is allowed at that point, and the Entry Station shall read the card and verify that the card is valid.

    c.   Once the vehicle pulls forward, the entry barrier gate's closing detector device shall then detect the presence of the vehicle. Upon clearing the barrier gate's closing detector, the barrier gate arm shall lower to the closed position and reset the lane for a subsequent transaction.

    d.   The barrier gate's mechanical counter shall increment by a count of one.

    e.   The entry event shall be validated and the associated data with the entry event shall be stored.

    f.   The Parking Space Count System shall decrement the number of available spaces by a count of one from the appropriate facility and/or level when a valid entry event has occurred.

2.   Invalid Proximity Card Entry: Public Entry Lane

    a.   When the vehicle activates the arming loops, the message on the Entry Station's color display shall read and a female audible voice

shall sound "Please Press button for Ticket or Insert/Present Credit Card"

    b.   When an invalid proximity card is presented, the proximity card reader shall emit an audible "beep" to confirm that the card is read and a red light shall blink on and then off. The display screen shall display the message "Card Invalid. Please press button for ticket or press intercom for assistance."

    c.   If the ticket button is pressed the transaction continues as a normal ticketed entry transaction.

3.   Proximity Card Passback Violation: Public or Employee Entry Lane

    a.   If an attempt is made to enter a facility with a proximity card that is already present in that facility or any other facility the following shall occur:

        (1)   System shall detect the passback attempt,
        (2)   Passback attempt shall be logged in the event log,
        (3)   Appropriate alarms (if enabled by HMC) shall be sent to workstations,
        (4)   Barrier gate shall remain closed, and
        (5)   Display shall read and a female audible voice shall sound "Card Already Present in Facility"
        (6)   Passback attempt may only be overridden by a supervisor

4.   Proximity Card Exit: Public Exit Lane

    a.   The cardholder's vehicle shall first cross over the LPR trigger loop. When the vehicle activates the arming loops, the message on the PID's display alternates between the two messages "Please Insert Ticket" and "Or Insert/Present Credit Card Used at Entry"

    b.   After the proximity card is verified, the barrier gate shall rise to the open position, allowing the vehicle to exit the parking facility.

    c.   Once the vehicle pulls forward, the exit barrier gate's closing detector device shall then detect the presence of the vehicle. Upon clearing the barrier gate's closing detector, the barrier gate arm shall lower to the closed position and reset the lane for a subsequent transaction.

    d.   The barrier gate's mechanical counter shall increment by a count of one.

    e.   The exit event shall be validated and the associated data with the exit event shall be stored.

    f.   The Parking Space Count System shall increase the number of available spaces by a count of one for the appropriate facility and/or level when a valid exit event has occurred.

5.   Proximity Card Passback Violation: Public, Employee, and Ground Transportation Exit Lane

a. If an attempt is made to exit a facility with a proximity card that is not present in that facility the following shall occur:

    (1) System shall detect the passback attempt,
    (2) Passback attempt shall be logged in the event log,
    (3) Appropriate alarms (if enabled by HMC) shall be sent to workstations,
    (4) Barrier gate shall remain closed, and
    (5) Display shall read and a female audible voice shall sound "Card Not Present in Facility"
    (6) Passback attempt may only be overridden by a supervisor

6. Proximity Card Entry: Employee Parking Facility – Boren Garage

a. When a driver presents their proximity card at an entry lane, the proximity card reader shall emit an audible "beep" to confirm that the card is read and a green light shall blink on and then off, no other entry method is allowed at that point and the proximity reader shall read the card and verify that the card is valid.

b. After the proximity card is verified, the barrier gate shall rise to the open position, allowing the vehicle to enter the facility.

c. Once the vehicle pulls forward, the entry barrier gate's closing detector device shall then detect the presence of the vehicle. Upon clearing the barrier gate's closing detector, the barrier gate arm shall lower to the closed position and reset the lane for a subsequent transaction.

d. The barrier gate's mechanical counter shall increment buy a count of one.

e. The entry event shall be validated and the associated data with the entry event shall be stored.

f. The PSCS shall increase the occupancy count of the facility by a count of one.

7. In the event that the proximity card does not work at the entry, the driver shall press the intercom button for assistance.

8. Proximity Card Exit: Employee Parking Facility – Boren Garage

a. The driver shall present their card at the exit reader and the reader shall emit an audible "beep" to confirm that the card is read and a green light shall blink on and then off.

b. After the proximity card is verified, the barrier gate shall rise to the open position, allowing the vehicle to exit the facility.

c. Once the vehicle pulls forward, the exit barrier gate's closing detector device shall then detect the presence of the vehicle. Upon clearing the barrier gate's closing detector, the barrier gate arm shall lower to the closed position and reset the lane for a subsequent transaction.

d. The barrier gate's mechanical counter shall increment by a count

of one.
e.   The exit event shall be validated and the associated data with the exit event shall be stored.
f.   The PSCS shall decrease the occupancy count of the facility by a count of one.

9.   In the event that the proximity card does not work at the exit, the driver shall press the intercom button for assistance.

2.06   Handheld computers for Issuance of Citations
A.   The vendor shall include handheld computers with integrated field printers, or optional detached portable printers, and all items and software necessary to interface to the host system.
B.   Host hardware and software, in this case, shall refer to the proposed parking management system with which the handheld computers will interface. Vendor shall provide a recommendation for appropriate configuration. Additionally, vendor shall supply any necessary peripheral equipment to interface to the host system or handheld devices, such as printers, magnetic stripe readers, color camera, and bar code readers.
C.   Handheld computer shall be able to communicate with the main system using standard networking protocols and also supporting non-proprietary security such as HTTPS.
D.   The system shall allow for the addition of handheld computers, users, locations, and modules at a later time.
E.   The vendor will deliver, install, and integrate the necessary handheld hardware and software components with the proposed parking management system to achieve a fully functional, automated system.
F.   The vendor shall offer total system support for the handheld computer hardware and software under a single comprehensive maintenance and support program. During the term of the maintenance and support program, the vendor shall provide scheduled new releases of the handheld and communications software.
G.   The handheld computer user interface shall be easy to use and shall promote longevity of the handheld device. At no time during data entry shall users have to memorize codes. All entries shall be selectable from a screen. This screen shall use a simple scrolling and paging function for location of information. The system shall allow users to browse files at any time without being in data entry mode.
H.   Pay-by-Space (optional) – The software shall support integration with major pay-by-space suppliers to communicate in real time with centralized pay station servers to provide enforcement officers with stall status information.
I.   The software shall be able to capture new information from the server and transfer it directly to the citation without re-entry by the user.
J.   The software shall provide a color-coded display of real-time parking stall (space) information.
K.   Handheld software shall include the following:
a.   User Configuration – The handheld software shall be completely configurable so that the supervisor may select data entry fields and make them required entry, optional entry, or unused.
b.   Screen Order – The handheld shall support presentation of citation data entry screens according to a user-specified order.

c. Password/Security – The software shall require a valid logon ID and possess two levels of security: one for system administration/configuration and the other for field personnel.

d. Handheld Security – The handheld shall have a security option so unauthorized users cannot access the system.

e. Wireless Option – The software shall support real-time wireless communications over a wireless LAN or cellular network.

f. Master Files – The system shall support entry of information such as vehicle make, model, color, style, plate type, violation, location, void, and standard comment codes. The system shall also support full registered owner, scofflaw, VIP, vehicle notifications, and tow request files.

g. Master Files – The system shall support reservations files.

h. Permit Display and Sales – The system shall allow users to search for reserved permits and to sell permits for specified events.

i. Citation Display and Edit – The system shall allow users to display all citation data entered to that point and to edit or modify any field without disruption of the citation entry process.

j. Citation Browsing, Voiding, and Reprinting – The system shall allow a user to view and void (optionally) any and all citations written by the user since the last upload of data to the host. Citation voids shall be tracked by void code and officer ID. The system shall support reprinting of issued citations.

k. GPS integration – Using the handheld computer's native GPS program, the software shall allow users to attach geo-position coordinates to citation records. In addition the software shall support map-based tracking of the location of the handheld computers in real-time.

l. Pay-by-Cell (optional) – The software shall support integration with pay-by-cell parking services, allowing qualified customers to pay for parking via cell phone, with relevant information available real-time to enforcement officers.

m. Multiple Citation Alarm – The software shall allow authorized personnel to select whether they wish to check for multiple citations to the same vehicle in the same day and notify the officer of the previous citation.

n. Auto Tag/Permit Search – When the license plate and permit number (if applicable) are entered during citation entry, the system shall automatically search the customer, vehicle, VIP, scofflaw, and tow request files for a match. If a match is found, the customer and vehicle information shall be automatically entered into the proper data fields without additional keying by the officer. If a match is found in any of the VIP, scofflaw, or tow request files, the system shall supply feedback to the user. If a match is found in the scofflaw file, the system shall display the number of unpaid citations, and outstanding balance.

o. Chalking – The system shall support monitoring of vehicles in fixed time zone parking areas. The system shall maintain a file of tag numbers in fixed time parking and, at any time, display the elapsed time and previous location of the vehicle. The software shall allow users to enter a citation entry module directly from the chalking module with one keystroke. The chalk tire records shall be able to be downloaded into the parking

database for future reference.

p.   Time Stamping – All transactions shall be time stamped by the system's internal clock. This feature may not be modified by field staff.

q.   Warnings – The system shall support the issuance and tracking of warnings as well as actual citation issuance.

r.   Location – The system shall support standard location codes and descriptions, location comments, block numbers, and meter numbers.

s.   Comments – The system shall support both standard comment codes and free-form comments. Software shall allow the user to select whether the comments are printed on the citation or "hidden" and uploaded to the database.

t.   Fines/Violations – The system shall be configurable by authorized personnel to allow field personnel to modify the standard violation fine. The system shall support the entry of one violation per citation. The system shall prompt the user if an additional citation should be issued to the vehicle. The system shall prompt the user for information regarding the additional violation.

u.   Bar Codes – The software shall support the printing of a laser-quality bar code, reflecting a citation or on-demand permit number, so that payment can later be easily and accurately applied during batch payment entry. The system shall support both "2 of 5" and "Code-39" (aka 3 of 9) bar code types. The system shall be able to put appropriate information (up to at least 20 characters) into the bar code.

v.   Field Permit Checks – The handheld software shall provide the interface with a bar code laser scanner to perform validity checks on bar coded decals and hang tags.

w.   User Defined Print Formats – The software shall allow authorized users to design an unlimited number of custom print formats. This includes a selection of variable fields as well as to print warnings.

x.   Permit Double Entry – The software shall include an optional feature to require mandatory double entry of permits.

y.   Required License Plate Double Entry – The software shall allow authorized personnel to select whether a license plate must be entered twice for confirmation.

L.   The handheld computer shall meet the following minimum technical specifications:

a.   Batteries – The main battery shall be a removable rechargeable lithium ion 3.7 V, 3600 mAh. There shall be a low-battery indicator.

b.   Display – Transflective color 3.5" full VGA with backlight, 640 x 480 pixel.

c.   CPU – XScale™ PXA270 624 MHz processor

d.   Operating system – The most current version of Microsoft® Windows

e.   User interface – The handheld computer shall utilize an ultra-durable, environmentally sealed QWERTY keypad.

f.   Memory – The handheld computer shall support 256 MB RAM, 1 GB Flash memory.

g.   Durability – The handheld computer shall meet environmental sealing rating of IP54 for protection against rain and dust. It shall withstand a 5

ft. drop to concrete, 2 drops per 6 sides at ambient temperature 73° F/23° C; 4 ft. drop to concrete, 6 drops per 6 sides over its operating temperature range. It shall withstand 1,000 1.6 ft./.5 m tumbles (2,000 drops).

h. Size – The handheld computer, including standard battery, shall not weigh more than 14.9 oz. (423 grams). The unit shall not exceed dimensions of 6" (L) x 3.3" (W) x 1.7" (D) or 15.24 cm (L) x 8.4 cm (W) x 4.4 cm (D).

i. Environment – The unit (without battery) shall be stored without damage within a temperature range of -40° to +140 F (-40° to +60° C). Operating temperature range shall be 14° F to 122° F (-10° to 50° C).

j. The handheld computer shall be equipped with integrated imaging solutions. The software shall automatically download images and associate them to the appropriate citation record. Integrated imaging solutions are:

- 3.2 megapixel color camera with auto-focus lens and user controllable flash.
- 2D imager engine, 640 H x 480 V pixels (gray scale).

k. The handheld computer shall support RS-232 and USB 1.1 external interfaces.

l. The handheld computer shall include integrated data communication meeting IEEE 802.11a/b/g standards (direct sequence wireless LAN and wireless PAN (Bluetooth® v2.1)).

m. The handheld computer shall support wireless WAN data and cellular communications as follows:
WWAN radio: GSM: 3G HSDPA; CDMA: EVDO Rev A

n. The handheld computer shall support the following security protocols for 802.11 standards: WPA2, WEP (40 or 128 bit), TKIP, TLS, TTLS (MS-CHAP), TTLS (MS-CHAP v2), TTLS (CHAP), TTLS-MD5, TTLS-PAP, PEAP-TLS, PEAP (MS-CHAP v2), AES, LEAP. CCXv4 certified and FIPS 140-2 certified.

o. Warranty – The handheld computer shall have at least a one-year standard warranty.

p. Electrical safety – The handheld computer shall be certified to UL / cUL 60950-1, IEC / EN60950-1.

q. RoHS – The handheld computer shall be RoHS compliant.

M. The printing device shall meet the following specifications:

a. Batteries – Shall be a removable and rechargeable lithium ion battery.

b. Environment – The printer shall be stored without damage within a temperature range of -40° to 70° C (-40° to 158° F).

c. Media loading – The printer shall have a "clamshell" design.

d. Print resolution – The printer resolution shall be at least 203 DPI (8 dots/mm).

e. Print technology – The printer shall use direct thermal technology.

f. Print width – The printer shall have a maximum print width of 2.84" (72 mm).

g. Size – Printer shall not weigh more than 1.73 lbs. (.78 kg) including paper

and batteries; 1.34 lbs. (.61 kg) printer only. The unit shall not exceed dimensions of 6.54" (L) x 4.906" (W) x 2.75" (H) or 16.61 cm (L) x 12.46 cm (W) x 6.99 cm (H).

    h. Speed – The printer shall have a speed of 2 IPS (51 mm) even when printing barcodes and signatures.

    i. Stock width control – The printer shall support paper roll widths from 1" to 3".

    j. Wireless printing – The printer shall support Bluetooth wireless communication.

    k. Memory – The printer shall be equipped with at least 4 MB of Flash memory and 2 MB of RAM.

    l. Warranty – The vendor shall offer at least a two-year warranty for the printer.

    m. Electrical safety – The printer shall be certified to FCC B, CE, UL/cUL.

    n. The printer shall be RoHS compliant.

N. Handheld Communications

    a. The system shall offer a software manager for host communications.

    b. Handheld computer shall be able to communicate with the main system using standard networking protocols and also supporting non-proprietary security such as HTTPS.

    c. The system shall provide direct host communication with multiple handheld units via high-speed data communications. High speed communications include communication speed of up to 11 Mbps using wireless 802.11b communication solution or communication speed of up to 800 Kbps for Bluetooth communication. All necessary hardware shall be provided by the vendor.

    d. The system shall provide real-time in-the-field communications. Wireless communications shall be offered in 802.11b, GPRS, or WiFi.

O. Parking Citation Manager Requirements

    a. The system shall allow users to enter parking citations:
        i. Via the system's user interface.
        ii. Via automatic upload from a handheld computer.
        iii. Via upload from a laptop computer in a field vehicle.

    b. All information normally associated with a specific citation such as: ticket #, license #/yr/state (or province), plate type, meter #, date issued, time Issued, officer code, location code, violation code, vehicle ID information (e.g. make, model, color), VIN, and miscellaneous officer or office notes shall be available for view in the citation record view.

    c. Users shall be able to enter a citation via the application interface in a summary form (for taking payment), then have the handheld citation data import complete the data entry of the citation.

    d. The system shall support the pre-payment of citations not currently in the system (citations paid 'off the windshield').

    e. Users shall be able to change the status of a citation including void, transfer, uncollectible, reduce to warning, write off, etc.

    f. Users shall be able to convert overpayments on citations to

miscellaneous revenue and identify the specific general ledger account to which the overpaid amount will be applied for financial reporting purposes. This shall be able to be done on individual overpaid records or via a batch process. The batch process shall allow users to stipulate which overpaid citations to convert using criteria specified by the user and including the amount by which the citation has been overpaid.

g. The system shall be able to restrict overpayments to a maximum amount or percentage based on user access control.

h. From the view of a citation record, the system shall provide direct access to or links to:

    i. Detailed violation information including: fine structure, issuing officer ID, location (including zone, lot/street ID, block number and meter/space number), violation, issue date and time, chalk time.

    ii. Detailed financial information including fine amount, escalations, accumulations, late fees, and other adjustments or fees.

    iii. Detailed status information regarding balance due, addition of late fees and fine increments, administrative holds, and adjustments.

    iv. Customer name, ID number, and associated company name on the citation if there is a customer assignment.

    v. Complete history of transactions associated with the citation, including monetary, telephone, and walk-in contacts.

    vi. Hearing information from the citation record (direct access).

    vii. Receipt (payment) information from the citation record (direct access).

i. The following information shall display on the citation record:

        Customer
        Vehicle
        Hearings
        Receipts
        Payment plans
        Tire chalk data

j. The citation manager shall meet the following requirements:

    i. Provide a color-coded citation information summary screen that makes use of consistent color schemes, readily identifiable icons, and context-sensitive menus.

    ii. Provide direct access to basic citation information (customer, vehicles, appeals, etc.) on a single screen.

    iii. Provide direct access to financial information associated with a citation (invoices, receipts, etc.) on a single screen

    iv. Support the insertion of an unlimited number of user-defined fields. Field definitions include data type (date, flag, character, etc.), field title, length of field, etc.

    v. Support the attachment of scanned documentation, digital images, and other electronic items to citations.

    vi. Display a visual indicator on records with attachments.

    vii. Be able to reassign citations to a different customer (e.g. from vehicle leasing company to vehicle lessor).

    viii. Support the transfer of citation balance due items to an organization-

wide account/billings receivable system.

ix. Record overpayment on citations from counter payments, imported payments, Web payments, or mail-in payments.

x. Apply overpayments on citations to other receivables (other citations or boot/tow fees), or to pay out to the customer.

xi. Support accumulated violations.

xii. Define one violation per citation.

xiii. Define whether a violation uses accumulation or escalation.

xiv. Include a detailed list of the history of customer association with a citation. The information shall include but not be limited to the user who created, removed, or changed the customer association.

xv. Automatically assess escalations/late fees to citations meeting criteria without the user initiating the process.

xvi. "Freeze" a citation from accruing late penalties and receiving notices.

xvii. Automatically generate letters/e-mails for overdue citation notices without the user initiating the process.

xviii. Generate a letter "on-the-fly" directly from the citation record. The letter or e-mail generated shall be recorded in the citation and customer's letter histories, as well as a copy of the letter or e-mail sent.

xix. Generate and print notification letters while maintaining an audit trail within the application. Direct access to letter history shall be provided, as well as storing a copy of the letter in the history

xx. E-mail notification letters while maintaining an audit trail within the application. Direct access to letter history shall be provided, as well as storing a copy of the e-mail in the history

xxi. Extensive notes field (including date of the note, note type, and comments).

xxii. Track all changes and adjustments made to a citation to a specific individual, date, and time.

xxiii. Accommodate a predefined digit alphanumeric format.

xxiv. Provide a mechanism for rapid and convenient entry of hand-written citations utilizing defaults from the previously entered citation such as date, officer number, location, etc. This feature shall be toggle-able, that is, supervisors shall be able to turn "fast entry" on and off as desired.

xxv. Be able to restrict full data edit and delete capabilities to authorized individuals.

xxvi. Track and define scofflaws and download scofflaw information to handheld citation units.

xxvii. Adjust the monetary amount of a citation.

P. Electric Parking Citation Requirements:

a. The software shall support citation entry and printing from a laptop computer in the field (i.e. in an enforcement vehicle).

b. The software shall provide the following:

i. Print citations using USB printer connected to the laptop.

ii. Upload citations from the laptop to the parking management system.

iii. Integration with License Plate Recognition enforcement software.

c.   The software shall be compatible with either Windows XP or Vista operating system.

Q. Vehicle Registration

a.   This software module shall support the complete control of the vehicle registration process for parking management, including:
  i.   Link multiple customers to a vehicle.
  ii.   Define vehicle assignment categories, such as registered owner, driver, rental car, etc.
  iii.   Prioritize drivers.
  iv.   Manage and process the State of Washington plate type series.
  v. Maintain vehicle ownership and plate type information.
  vi. Establish current liability for the vehicle.
  vii.   Provide access to a DMV retrieval service for most states (subscription service).
  viii. Assign a unique registration number.
b.   Provide a color-coded vehicle information summary screen that makes use of consistent color schemes, readily identifiable icons, and context-sensitive menus.
c.   The software shall view the following types of activity associated with a vehicle:
  i. Notes
  ii. Citations
  iii. Customers
  iv. Permits and other credentials
  v.   Boot/tow status, VIP, and other notifications or statuses for officers in the field
  vi. Parking transaction activity
d.   The software shall provide a detailed audit trail of activity related to the vehicle.
e.   The software shall provide a detailed audit trail of parking activity related to the vehicle.
f.   Provide direct access to all information and invoices associated with a vehicle on a single screen, as well as to go directly to the detail of invoices on the record. For example:
  i. Citations
  ii. Responsible customer
  iii. Permits and other credential fees
  iv. Boot/tow fees
  v. ISF fees
  vi. Total balance due
g.   Create scofflaw files based on the citations associated with a vehicle,

h. Provide a scofflaw flag on the vehicle record for easy identification.
i. The system shall automatically remove the active scofflaw flag if the vehicle no longer meets the scofflaw requirements.
j. The system shall support assigning VIP status to a vehicle.
k. The system shall support sending custom vehicle notifications to handheld computers. Notifications include a start and end date, notification type, and comments (e.g. do not ticket or tow, VIP, boot/tow, scofflaw, etc.).
l. Support the attachment of scanned documentation, digital images, and other electronic items to the record.
m. Display a visual indicator on records with attachments.
n. Support the insertion of an unlimited number of user-defined fields. Field definitions include data type (date, flag, character, etc.), field title, length of field, etc.
o. Extensive notes field (including date of the note, note type, and comments).

R. Appeals and Hearings Requirements

a. The software shall support an integrated, customizable appeals and hearing process for both citations and boot/tows.
b. The system shall support the following capabilities:
   i. Configure appeals life cycle stages (e.g. informal hearing, first appeal, second appeal, etc.). This shall include the definition of fees to be applied when an appeal reaches a given stage.
   ii. Configure multiple appeal types defined by violation types, boot/tows, accumulation criteria, or custom criteria, as well as the appeals life cycle stages that apply.
   iii. Configure multiple hearing locations defined by valid days of the week/time of day and specific officers who will be available for dockets scheduled for each location.
   iv. Configure multiple docket types defined by hearing location, whether or not the officer is required to be present, appeal duration, and other criteria including custom criteria.
   v. Configure a system-wide docket lead time to prevent appeals being scheduled too close to the current date and to prevent a docket from being edited within the lead time.
c. Users shall be able to:
   i. Associate multiple citations or boot/tows to single appeals.
   ii. Put citations or boot/tows on hold while an appeal is in process (no accumulation of late days, fees, or notices while on hold).
   iii. Restrict payments for items on appeal so that no payment can be taken for specified boot/tows or citations while they are on appeal.

     iv.   Require an appeal to have a hearing or apply the result with requiring a hearing.

     v.   Configure a time limit to appeal a citation and whether payment is required before the appeal.

     vi.   Assess user-defined court fees.

     vii.   Set revised due dates.

     viii.   Generate/print and/or e-mail appeal decisions and/or letters on demand or via a batch process. This feature shall allow users to call up one of several standard customer-defined appeal response letters in the database file and have information about the citation, customer, and vehicle automatically entered on the standard letter.

     ix.   Enter user-defined result codes to indicate appeal outcome.

     x.   Define dockets (hearing date and time).

     xi.   Assign appeals to available dockets.

     xii.   Create and edit appeals directly from the customer record.

d.   Appeals and hearing management shall be integrated with citation issuance processes on handheld devices, including:

     i.   Print hearing date on citations as they are issued in the field.

     ii.   Specify docket lead time and field officer notification threshold for 'open block' dockets.

e. The software shall provide the following reports:

     i.   Scheduled Docket Report - shows the dockets that are scheduled within a defined date range.

     ii.   Open Block Docket Report - shows the potential number of appeals that will be heard on an open block docket.

f. The system shall:

     i.   Allow parkers to manage their appeals online.

     ii.   Relationally link and simultaneously update citation and boot/tow files.

     iii.   Allow direct access to financial information related to the citation or boot/tow. This includes payments, adjustments, late/fees, appeal reductions, etc.

     iv.   Allow direct access between appeal, docket, citation, boot/tow, customer, vehicle, and receipt records.

     v.   Include a judgment decision note field which can be incorporated in the automated hearing notification letters generated within the software.

     vi.   Allow for the adjustment of the citation's final amount due by an authorized person and keep track of all adjustments made to the record.

     vii.   Contain a user-defined appeal note code that allows users to read why an appeal was upheld/denied, as well as to print this information on letters generated within the software.

     viii.   Display a message if a citation is currently on appeal.

   ix. Support extensive notes field (including date of the note, note type, and comments).

   x. Support attachment of digital pictures, files, or documents to the appeal record.

   xi. Display a visual indicator on records with attachments.

   xii. Allow direct access to letter history, as well as storing a copy of the letter in the history.

   xiii. Support the insertion of an unlimited number of user-defined fields. Field definitions include data type (date, flag, character, etc.), field title, length of field, etc.

   xiv. Provide a brief color-coded summary and direct access to all information and invoices associated with an *appeal* on a single screen. This summary screen shall make use of color schemes and readily identifiable icons. It shall also provide context-sensitive menus.

   xv. Provide a brief color-coded summary and direct access to all information and invoices associated with a *docket* on a single screen. This summary screen shall make use of color schemes and readily identifiable icons. It shall also provide context-sensitive menus.

   xvi. Provide a brief color-coded summary and direct access to all information and invoices associated with a *docket* on a single screen. This summary screen shall make use of color schemes and readily identifiable icons. It shall also provide context-sensitive menus.

g. Customer Tracking

   i. The customer manager shall view all activity associated with individuals and groups that park or are responsible for parking.

   ii. The following features shall be present:
    1. One unique account number issued to a customer.
    2. Display of balance due with convenient access to detail.
    3. Assignment of customer classification (e.g. vendor, staff, visitor, etc.).
    4. Assignment of customer sub-classification (e.g. full-time, part-time, quarterly parker, etc.).
    5. Turn on a Do Not Accept Checks feature which works exclusively with the register.

 h. The system shall display a summary section with direct access to all information and invoices associated with a customer on one screen. Information includes:

i. Citations
   ii. Permits
   iii. Events
   iv. Vehicles
   v. Appeals
   vi. Boot/tow records
   vii. Properties
   viii. Payments

i. The customer manager shall allow users to view and maintain information associated with individuals and groups that park or are responsible for parking. For example:

   i. Unlimited number of addresses (physical and e-mail) per individual.
   ii. User-defined address types (home, work, school, etc.).
   iii. Prioritize multiple addresses.
   iv. define addresses as invalid.
   v. Define e-mail address types (work, home, etc.).
   vi. Driver's license number field.
   vii. Capacity to apply held monies to a customer account with complete audit trail.
   viii. Insert an unlimited amount of user-defined fields. Field definitions include data type (date, flag, character, etc.), field title, length of field, etc.

j. The customer manager shall send user-defined customer statements in a variety of formats to inform customer of all outstanding invoices on account such as:

   i. Citations
   ii. Permit and credential fees
   iii. Boot/tow fees
   iv. ISF fees
   v. Hearing fees

k. Associate customers to a permit allotment group, enabling customers in the group to purchase permits that have been 'set aside' for the group.
l. Provide tracking of contact information related to a customer including multiple addresses, phone numbers, and e-mail.
m. Send individual e-mail directly to a customer from the customer record and to save the e-mail in letter history.
n. Direct access to letter history shall be provided, as well as storing a copy of the letter in the history.

o. Identify potential duplicate customer records with option to merge the duplicate records into one.
p. Create scofflaw files based on the customer and not the vehicle.
q. Provide a scofflaw flag on the vehicle record for easy identification.
r. The system shall automatically remove the active scofflaw flag if the vehicle no longer meets the scofflaw requirements.
s. Associate free-form financial transactions and adjustments to a customer.
t. Direct access to receipts (payments) associated with the customer.
u. Direct access to financial information related to the customer, including includes invoices, payments, adjustments, etc.
v. Direct access to a customer's association with a property.
w. View customer's exception transaction history.
x. View parking transaction history.
y. Extensive notes field (including date of the note, note type, and comments).
z. Provide attachment of scanned documentation, digital images, or other electronic items to the record.
aa. Display a visual indicator on records with attachments.
bb. Provide a brief color-coded summary and direct access to all information and invoices associated with a customer on a single screen. This summary screen shall make use of color schemes and readily identifiable icons. It shall also provide context sensitive menus to allow appropriate edits, additions, status changes, and payment options, etc.

S. Parking Permit and Credentials

a. The system shall set up, issue, track and manage permits. Permits are designed to grant permission, authorization, or certain privileges. A permit may be a card, sticker, RFID card, Prox card, hangtag, etc. A permit may be issued to a person (or persons) or a property. When a permit is issued, a relationship shall be established between a customer, a vehicle (or property) and the permit.
b. The system shall support strict inventory control for permits, enabling designated administrators to control the flow of permit stock, tracking the movement of permit stock from cashier to cashier, and providing for complete chain of custody of permit stock through typical permit lifecycles including but not limited to lost/stolen and destroyed.
c. The system shall support the configuration of refillable "value permits". Value permits allow limited access to a facility (or facilities). The limit can be by the number of uses, number of days, or a dollar value. Value permits shall decrement in value as they are used.

d. The system shall produce and accept encoded parking credentials.
e. The system shall apply event value to existing permits.
f. The software shall allow users to manage the relationships between a customer, a vehicle (or property), and the permit after a relationship has been created, including deleting the relationship when appropriate.
g. The system shall allow configuration of allotted or allocated permits for specific customers or customer groups/departments, and shall seamlessly manage the allotted permits in the same manner as other, non-allotted permits.
h. The system shall track permit allotment history.
i. The system shall allow users to configure specific permit ranges to be eligible for parking in specific parking facilities for specific days of the week and times of the day.
j. The software shall allow users to create and modify permit ranges, including the following characteristics, from the system user interface and from import of configuration details:
  i. Electronic permit
  ii. Identify which groups of customers are eligible to purchase and what their fees will be (based on customer group).
  iii. Specify which general ledger account number is to be used for each customer group's permit purchases.
  iv. Configure the effect of the permit purchase on any permit number limits established per customer group.
  v. Identify in which parking facilities the permits will be eligible to park.
  vi. Configure per-day use limits for value permits.
  vii. Configure a minimum value that a parker must have on a value permit in order to use it to enter a facility.
  viii. Configure value permits so that a third party can be billed each time a value permit is used (rather than all at once when it is sold).
  ix. Set up fee schedules, refund schedules, and renewal fees.
  x. Restrict the number of permits a customer can purchase.
  xi. Prorate permit sales/returns and automatically calculate value based on user-defined rules (e.g. weekly, monthly, daily, etc.).
  xii. Provide a brief color-coded summary and direct access to all information and invoices, including event value, associated with a permit on a single screen. This summary screen shall make use of color schemes and readily identifiable icons. It shall also provide context-sensitive menus.

k. This module shall allow a user to view all activity associated with a permit from a single screen, including:

i. Customers and end date of customer/permit relationship
ii. Vehicles
iii. Valid locations for parking
iv. Associated properties
v. Bulk permit relationships
vi. Related financial transactions
vii. Associated payment plans
viii. Overrides of passback rules
ix. Overrides of valid facilities
x. Handheld notifications
xi. Notes
xii. Parking transaction activity
xiii. Events and event values
xiv. Direct access to allotment information related to the permit.
xv. Direct access to financial information related to the permit. This includes payments, adjustments, additional fees, refunds, etc.
xvi. Detailed audit trail for activity related to the permit record

l. The application shall display all locations where an individual permit is valid for parking.

m. This software module shall provide for the complete control of the parking permit issuance process, including:

i. Create three (3) types of permits: inventoried, non-inventoried, and non-tracked permits.
ii. Cashiers selling a permit shall be able to view which permit ranges the customer in question is eligible to purchase.
iii. Inventory and track uniquely numbered permits as they are being issued.
iv. Return and resell a permit.
v. Add value to a value permit.
vi. Cashiers shall view and select which facilities a value permit can be used for when selling a value permit.
vii. Cashiers shall view and select a sell-on-use third party for eligible value permits.
viii. Cashiers shall price eligible value permits at the time of sale if authorized to do so.
ix. Record a permit's effective, issuance, and expiration dates.
x. Track prior permits, gate cards, and space assignments.
xi. Scan a permit's bar code at point of sale.
xii. Track gate cards in conjunction with a permit or as a unique permit type.
xiii. Register one or more vehicles to a permit (carpooling).

xiv. Print permits at the time of a sale from a networked or receipt printer (including barcodes and graphics).

xv. Cashiers shall view all available reserved stalls in a selected area when selling a reserved permit.

xvi. Payroll deduction plan for staff. This software feature shall capture data concerning individuals choosing to purchase parking permits through a payroll deduction option. It shall allow for the automatic creation of extensive customer-defined standard reports for printing and sending to various departments and individuals such as Payroll, Auxiliary Accounting, etc.

xvii. Reset the permit fee for monthly billing.

xviii. Transfer permit balance due items to organization-wide account/billings receivable system.

xix. Sell a permit to a customer and charge the transaction to an approved 3rd party.

xx. Backdate permits, assigning a return date earlier than the date the return is processed.

n. The system shall allow users to configure specific permit ranges to be eligible for parking in specific parking facilities for specific events.

o. The system shall allow users to reserve permit ranges for use for specific events or over a specific time period through the cashier station. The system shall provide the option of collecting parker names for the reserved permits. Permit fees (either including unsold permits or not) shall be billed to a third party.

p. Pre-sell and print a permit to a customer for a specified event.

q. Reserve permits for future sale.

r. Unlimited customer-defined permit possession status indicators including active, lost, stolen, and returned.

s. Download permit records to handheld computers by possession status (i.e. lost, stolen, returned, etc.), permit type and location.

t. Complete tracking and simplified issuance of temporary permits.

u. Associate multiple customers to a permit.

v. Make monetary adjustments.

w. Display permit account balance.

x. Population of permits for inventory management.

y. Allocation of permits that link to point of sale.

z. Extensive notes field (including date of the note, note type, and comments).

aa. Attach digital pictures or documents to the permit record.

bb. Display a visual indicator on records with attachments.

cc. Generate and print permit renewal letters while maintaining an audit trail within the application. Direct access to letter history shall be provided, as well as storing a copy of the letter in the history.

dd. E-mail permit renewal letters while maintaining an audit trail within the application. Direct access to letter history shall be provided, as well as storing a copy of the e-mail in the history.

ee. Insert an unlimited number of user-defined fields. Field definitions include data type (date, flag, character, etc.), field title, length of field, etc.

ff. Administrative users shall clone ranges of permits along with business logic and rules for ranges of permits such as limitations of sale, pricing, valid locations for use, valid customer classifications for purchase, etc.

gg. Administrative users shall configure the system to require the completion of custom fields from the permit record as part of the permit sale process.

hh. Administrative users of the application shall define which facilities/lots are available for a selected permit group.

ii. Administrative users of the application shall allow cashiers to select specific facilities/lots previously defined in the selected permit group, when selling an individual permit.

jj. Administrative users shall configure the application to allow a permit's selected valid facilities/lots (in which the permit is eligible to park) to be changed after the permit has been sold.

kk. Administrative users shall configure bundles of facilities to accommodate parkers who need permit access to a unique set of facilities not configured on a permit number range.

ll. Administrative users shall configure groups of facilities into 'tiers', designating how many facilities from each tier permits in a given permit group can access.

mm. Administrative users shall change valid facilities (lots in which the permit is eligible to park) in bulk for all permits in a permit group.

nn. Administrative users shall configure the system to require permits to be linked to a property and/or a vehicle during permit sale.

oo. The parking system shall support user definable restrictions on permits assigned to properties.

pp. Users shall search for all permits that are associated with a particular property, address, or license plate.

qq. Users of the parking system shall create and manage permit districts, or areas in which properties reside. The parking system shall restrict permit sales linked to properties based on what permit district the property resides.

rr. The parking system shall support a process in which permits can be automatically renewed or extended on a regular interval. The renewal process shall include importing of payments against the

renewed permit. It shall also track the payment history for a renewed permit over the entire life of the permit, including all of the renewal payments. The system shall support the use of grace periods for automatically renewed permits, allowing the user of the system to configure the grace period and thus control the number of days granted to customers before their permit is deactivated.

ss.   The system shall support automatic credit card billing for permit auto-extensions and renewals.

tt.   The parking system shall support a process of automatically replacing permits on a regular interval.

uu.   Assign alternative numbers to identify a credential (such campus ID's, municipal employee ID's, AVI tags, hangtags, etc.). These alternate numbers shall grant the parking privileges associated with the credential record when presented at the appropriate parking facility at the appropriate time.

vv.   Use a permit to enter a valid access controlled facility even when the gate is offline with the parking management system.

ww.   The system shall support a 'linkable permit' sales control mechanism to limit the sale of gate cards (typically Proximity cards) to parkers who already have active permits.

xx.   Use a credential as a tracked gate card, event pass, or enforced parking permit.

yy.   Search for incidents related to the credential from the credential's record, based on a date range.

T. Batch Permit/Credential Issuance and Invoicing

a.   The software shall have a manager that enables the user to issue a batch of permits to an individual, agency, or department, and bill for the amount due.

b.   Batch permit issuance shall support refillable value credential features including specifying initial value, sell-on-use third party, appropriate refund calculations, etc.

c. The batch permit issuance module shall include:

    i.   View all activity associated with the batch permit including customers, permits, receipts, and notes.

    ii.   Make monetary adjustments.

    iii.   Update permits to reflect bulk sale.

    iv.   Direct access to financial information related to the batch permit record. This includes payments, adjustments, additional fees, refunds, etc.

    v.   Extensive notes field (including date of the note, note type, and comments).

    vi.   Print permits (includes barcodes and graphics).

    vii.   Displaying bulk permit balance with payment information.

    viii.   Brief color-coded summary and direct access to all information and invoices associated with a batch permit

record on a single screen. This summary screen shall make use of color schemes and readily identifiable icons. It shall also provide context-sensitive menus.

ix. Assigning a unique number to each batch permit record.
x. Support for the attachment of scanned documentation, digital images or other electronic items to the record.
xi. A visual indicator on records with attachments.
xii. reserve permits for future sale.
xiii. Inserting an unlimited amount of user-defined fields. Field definitions include data type (date, flag, character, etc.), field title, length of field, etc.
xiv. Detailed audit trail for activity related to the permit record.
xv. Detailed audit trail for activity related to the permit record.

U. Wait Lists

a. The software shall compile and manage multiple wait lists based on a permit control group and/or permit control area (location/zone) or lot, while linking this information with permit inventories at the point of sale.
b. The capabilities of the wait list feature shall provide for the complete control of the permit wait list management, including:
   i. Wait lists that can be prioritized or not prioritized (lottery).
   ii. Prioritization based on an optional combination of a date field and custom fields.
   iii. Configuration options that either require a customer to be on a particular wait list to purchase a permit or do not require a customer to have a valid wait list record to purchase a permit. The software shall also provide an override feature.
   iv. Multiple choice options.
   v. Mutually exclusive wait lists.
   vi. Automatic update of the wait list position number when records are inserted or edited.

V. Anti-Passback

a. The system shall support the following anti-passback modes:
   i. Hard passback mode denies access when the entry/exit sequence is broken.
   ii. Soft passback mode allows access when the sequence is broken, but records the access as a passback violation.
   iii. Timed passback mode allows access when the sequence is broken only after a configurable amount of time has passed.
   iv. No passback mode ignores the entry/exit sequence and allows access for any activity.

   v. The maximum allowed number of soft passes shall be user configurable.

   vi. Passback mode shall be able to be set by credential, facility, facility bundle (a group of facilities set up 'on the fly' for permit sales), or permission group.

   vii. Import of wait list requests from external systems

W. Asset Management and Maintenance

  a. The parking system shall enable authorized users to inventory and manage property and assets.

  b. Authorized users shall be able to configure asset categories, departments, locations, zones, and vendors.

  c. The system shall support a work order lifecycle, displaying statuses such as open, canceled, scheduled, in progress, and complete.

  d. Assets shall be searchable.

  e. The system shall support work order assignment management by work category or zone, including automated work order assignment.

  f. Users shall be able to create work categories for various types of maintenance work to be completed.

  g. The system shall support maintenance schedule management for assets, groups of assets, and zones.

  h. Authorized users shall be able to escalate work orders.

  i. Users shall be able to record maintenance requests (work orders) for assets.

  j. The system shall be able to communicate asset management information, including work orders and maintenance information, and notes, to and from handheld computers in the field.

  k. The system shall support notes on assets.

X. Notice and Letter Generation Manager

  a. The software shall provide a module to allow for the generation and management of notifications.

  b. Each letter shall be printed and/or e-mailed based on customer-defined criteria.

   i. The following letter types shall be available in the software module:

   ii. Customer statements

   iii. Citation notices

   iv. Hearing notification/results notices

   v. Permit/credential renewal

   vi. ISF letter

  c. This software module shall specifically include the following features:

  i. E-mail of notices and letters
  ii. Support for full SMTP authentication
  iii. User-prioritized address types (address types shall include both e-mail and physical addresses)
  iv. Standard letters shall be able to be sent to a user-defined list of customers based on queries of singular records or queries of collections/groups of records.

d. The software shall allow the user to delineate the specific combination of conditions that must exist in order to trigger the printing of each standard letter type. Users shall be able to combine these conditions using logical operators to form more complex situations. Definable conditions shall include but not necessarily be limited to:

  i. Number of days citation has been outstanding (unpaid)
  ii. Number of unpaid citations
  iii. Letters for a specific state license plate only

e. The software shall allow certain defined fields in each standard letter type to be automatically filled in by accessing data in the database file at the time of printing. Fields defined for automatic data entry shall include but not necessarily be limited to:

  i. Individual listing of each unpaid citation
  ii. Total dollar amount due
  iii. Specific details for each outstanding citation
  iv. Vehicle description information
  v. Registered owner information
  vi. Customer authority name and address information
   f. The notice and letter generation manager module shall:

g. Allow letters to be printed on a standard printer that can be accessed via a local workstation.
h. Shall "roll back" letters if they were generated in error.
i. Allow an unlimited number of user-defined letter headings to be selected by letter type. The user-defined letter headings shall contain name, department, address, city, state, zip code, and phone number.
j. Allow for the customer unique ID number to be suppressed on letters/e-mails.
k. Generate and print notification letters while maintaining an audit trail within the application. Direct access to letter history shall be provided, as well as storing a copy of the letter in the history.

      l.   E-mail notification letters while maintaining an audit trail within the application. Direct access to letter history shall be provided, as well as storing a copy of the e-mail in the history.

      m.   Automatically generate letters/e-mails for overdue citation notices without the user initiating the process.

      n.   Automatically generate letters/e-mails for overdue insufficient fund notices without the user initiating the process.

Y. E-Mail Management

      a.   The system shall include an e-mail manager that can be used to compose and send e-mail to one or more customers.

      b.   The e-mail manager shall include the following:

         i.   view a list of existing e-mail (i.e. all previously saved e-mail).

        ii.   Add new e-mail for sending to one or more customers.

       iii.   An audit trail for each e-mail that is sent. This audit trail shall be accessible from relevant customer records as well as from the e-mail manager itself.

       iv.   Schedule e-mail to be sent automatically at specified times and dates.

        v.   Generate lists of recipients automatically, based on a variety of criteria including permit group, customer group, and others.

Z. Facility Management and Capacity Management/Inventory

      a.   The system shall allow for all spaces/stalls managed by the parking office to be inventoried, classified, and allocated to defined facilities, lots, and sub-areas.

      b.   The system shall allow for reports to be generated showing the physical inventoried capacity as compared to audited vehicle counts (occupancy) of any defined facility, lot, or sub-area.

      c.   View all activity associated with a facility including credentials (if relevant), customers, and parking transaction activity.

      d.   Search all parking transactions within a parking facility within a defined date and time range.

      e.   Refine a facility parking transaction search by exception transaction type or by whether the parking transaction is open or closed.

      f.   Define, configure, and manage entry and exit lanes within a parking facility without leaving the facility record.

      g.   Automate reversible lane management via a schedule.

      h.   Manually reverse a reversible lane without affecting its schedule.

      i.   Activate and deactivate a reversible lane schedule without having to edit the lane itself.

j.   Configure gates to vend for monthly parkers of specified occupancy types even though the lot is deemed full based on occupancy thresholds.

k.   Link an unlimited number of nested facilities within a parking facility

l.   Define a parking facility as:

     i. Access controlled only (available only to credential holders).
     ii. Revenue controlled only (available to only transient parkers).
    iii. Mixed access and revenue controlled.

m.   Restrict credential or permit sales within a parking facility to a wait list.

n.   Track all time-stamped, user modifications to a facility object.

o.   Configure incidents to warn authorized users of specific activities (such as vehicle back-outs, tailgating, etc.) as they take place within a parking facility.

p.   Search for specific incidents from the facility record based on a date and time range.

q.   Refine facility incident searches based on incident type.

r.   Compute a parking facility's current occupancy with an optional breakdown of each space type's current occupancy.

s.   Configure and enforce at what times during the week a credential is valid to enter and exit a parking facility.

t.   Configure a facility with a free exit.

u.   Configure a facility with a flat fee transient pricing schedule.

v.   The system shall include the following capacity management and space inventory features:

     i.   Define and configure facilities, lots, garages, decks, and streets in the application (collectively referred to as defined space).
     ii.   Break down the defined spaces into smaller sub-areas.
    iii.   Group together defined spaces to create collections of defined spaces for reporting.
    iv.   Categorize stall inventory by both stall use and space type.
     v.   The application shall display the number of active permits for a given defined space.
    vi.   Users shall manage capacity of permit sales for individual defined spaces.
    vii.   Users shall track oversell capacity for each defined space.
   viii. The application shall display to the user the actual (real-time) oversell rate for each defined space.
    ix.   Provide lot occupancy analysis in real time.
     x.   The application shall display to a cashier the available reserved spaces for a selected defined space or sub-area.

xi. The application shall support recording and reporting on vehicle counts for each defined space and sub-area.
xii. Send defined spaces to the handheld in the field for use in vehicle counts.
xiii. Import vehicle counts from handheld devices into the application for use in reporting.

AA. Occupancy Monitoring

a. The system shall display occupancy counts by user defined occupancy type.
b. The system shall monitor occupancy for facilities at which events are occurring, based on occupancy numbers specified for the event, occupancy type, and event schedule.
c. Occupancy shall be determined by entry and exit activity. Each entering vehicle shall subtract a count of one from number of available spaces. Each exiting vehicle shall add a count of one to number of available spaces. Directional logic shall be installed so that a vehicle entering an area through an entrance lane or through an exit lane shall be counted as an inbound vehicle. Vehicle exiting an area through an exit lane or through an entrance lane shall be counted as an outbound vehicle.
d. The system shall record the total number of parking spaces within areas shall be field programmable. Number of available parking spaces within each area shall be tracked and displayed. Anti-coincidence packages shall be provided which accurately monitor entering and exiting traffic that may occur simultaneously.
e. The system shall define each area with two programmable thresholds. One threshold shall be used to trigger "full status". A second threshold shall be used to trigger "open status". The software shall allow for manual overriding of "full status" of each area.
f. The system shall configure gates to vend for monthly parkers of specified occupancy types even though the lot is deemed full based on occupancy thresholds.
g. The system shall disable ticket dispensers at entry lanes when a facility is full. Full status operation shall be overridden.
h. The system shall maintain and display separate counts for each parking facility, gated lot, gated floor or gated zones within a facility, each with total occupancy or spaces available, total RCS and ACS occupancy and total RCS and ACS spaces available.
i. The system shall maintain the entry and exit counts per lane by user defined occupancy type.
j. The system shall maintain counts of each lane's illegal entries and exits.

BB. Web Services

    a.   The software system shall offer web services functions to allow external programs access to system features. Web services implementation shall be non-proprietary and include WSDL.

    b. Web services shall at a minimum, specifically interface with:

        i. Citation payments
        ii. Permit sales and returns
        iii. Access to account information
        iv. Appeals
        v. Permit reservations sales
        vi. Handheld computer communications
        vii. Miscellaneous item sales

    c.   The system shall allow for the creation of a web-based interface allowing secure online transactions and shall utilize UW's NetID for access to the site.

    d.   Web services shall operate over a secure network connection, including SSL.

    e.   Each web service shall support user authentication.

    f.   Web services shall provide a group of procedures and views that can be called from an outside system that is logged into a parking database.

    g.   Web services shall offer real-time interaction with the parking database.

    h.   Web services shall adhere to the business rules of the system so as not to compromise existing data or allow insertion of bad data.

    i.   Web services shall fully address permit sales. This includes inserting/updating customer information and inserting/updating vehicle information.

    j.   Web services shall allow pre-sell permits online to event attendees.

    k.   Web services shall allow a user to find and pay all citations for which they are responsible.

    l.   Web services shall allow a user to appeal citations.

    m.   Web services shall allow for more than one citation to be appealed on the same appeal record.

    n.   Web services shall allow a user to find personal account summary information including all invoices, vehicles, and contact information.

    o.   Web services shall allow a user to edit current biographical information.

    p.   All activities performed by a web service shall be logged in the system activity and/or financial log of the system.

    q.   Web services shall include support for insert/update activities to user-defined custom data fields in the system.

CC. Web Solutions

 r. The vendor shall offer Web development solutions for an e-commerce and customer inquiry website.

 s. The vendor shall offer packaged solutions and custom development options.

 t. The vendor shall develop a scope document outlining the work to be performed and offer a firm price.

 u. The e-commerce solution shall include a PA-DSS validated credit card solution.

 v. The e-commerce Web site shall be easily maintained using a 'dashboard'-like administrative console.

 w. The e-commerce solution shall not utilize cookies to store any information other than user and session information via application web servers.

 x. The e-commerce solution shall support expiration of cookies at end of session by logging off the application and closing the browser.

 y. The e-commerce Web site shall integrate with the parking system database.

 z. The following e-commerce solutions shall be made available:

  i. Customer Account Inquiry
  ii. Citation Payments
  iii. Permit Sales
  iv. Permit Waitlist
  v. Citation Appeals

2.04 Citation AppealsValidation Sales (including paperless EQUIPMENT AND SUBSYSTEM PERFORMANCE STANDARDS

 U. The system shall perform accurate calculations including:

  1. parking fees
  2. transaction counts
  3. Lot Utilization
  4. revenue processing
  5. reporting

 V. The system shall calculate parking fees based upon different parking areas, time/day of entry, applicable taxes, lengths of stay, time increments and rate structures

 W. Parking Space Count System Performance

  1. The PSCS shall operate in real-time with the PRCS. The count signals shall be received within one second from the event. The number of vehicles parking in a facility recorded by the PSCS and the PRCS shall

be the same. The Contractor shall assure HMC that the occupancy levels do not "drift" or "balloon" from having the same count number among the LPR, LPI, PRCS, and the PSCS for valid counts.

2. The workstation's display and dynamic signage displays shall be updated by the PSCS every ten seconds. This frequency shall be user configurable.

3. The PSCS shall count passing vehicles that cross the vehicle detection zones in a valid vehicular movement with 100% accuracy. Invalid counts include vehicles or other objects that enter detection zones in a manner that defeats the intent of the system. For example, a vehicle that backs out of a space and activates the count detectors can generate a false vehicle count. Invalid counts can also be generated by pedestrians, baggage carts, bicycles and various other foreign objects that enter the detection zones. The Contractor shall provide and install appropriate traffic delineators, such as bollards or jersey barriers, in the detection zones to force all traffic to pass through the detection zone in a valid movement and thereby limit the number of invalid counts.

4. During acceptance testing, each detection zone shall count valid vehicle movements with 100% accuracy over the testing period. The minimum number of vehicle counts to establish passing test criteria during a single lane test shall be 250 vehicle movements.

5. The entire PSCS, including the available spaces displayed to the patrons on PSCS signage, shall maintain 95% accuracy over a 24 hour period for each level and facility as a whole regardless of traffic volume. The accuracy shall be calculated by taking the difference between a real-time physical inventory and the occupancy reported by the PSCS and dividing it by the capacity for the respective level or facility. The 5% allowable error is inclusive of all invalid counts, improper lane delineation, and human error associated with manual counts.

X. Processing Times

1. The Parking Program shall achieve the allowable processing times listed below:

   a. Report generation for data less than 12 months old: less than 15 seconds
   b. Report generation for data 12 months or older: less than 30 seconds
   c. Credit card authorizations sent and returned: less than four seconds, The Contractor shall provide HMC with the speed of connection that is required to allow credit card authorizations to be sent and returned within four seconds or less, even at peak times and accounting for 150% increase in transactions. HMC shall coordinate with the Contractor to increase the available bandwidth

as necessary.

    d.   At vehicle entry, the total elapsed time from the point a vehicle triggers the picture capture zone to the point where the LPR Subsystem submits a valid LPN into the database shall not exceed two seconds for any single event.

    e.   At vehicle exit, the total elapsed time from the point a vehicle triggers the picture capture zone to the point where the LPR Subsystem communicates a successful or unsuccessful correlation message to the exit lane shall not exceed two seconds for any single event.

    vi.   validations, barcode validations, and printable non-barcode validations)

2.05   2.07 EQUIPMENT AND SUBSYSTEM PERFORMANCE STANDARDS

Y.   The system shall perform accurate calculations including:

1. parking fees
2. transaction counts
3. Lot Utilization
4. revenue processing
5. reporting

Z.   The system shall calculate parking fees based upon different parking areas, time/day of entry, applicable taxes, lengths of stay, time increments and rate structures

AA.   Parking Space Count System Performance

1.   The PSCS shall operate in real-time with the PRCS. The count signals shall be received within one second from the event. The number of vehicles parking in a facility recorded by the PSCS and the PRCS shall be the same. The Contractor shall assure HMC that the occupancy levels do not "drift" or "balloon" from having the same count number among the LPR, LPI, PRCS, and the PSCS for valid counts.

2.   The workstation's display and dynamic signage displays shall be updated by the PSCS every ten seconds. This frequency shall be user configurable.

3.   The PSCS shall count passing vehicles that cross the vehicle detection zones in a valid vehicular movement with 100% accuracy. Invalid counts include vehicles or other objects that enter detection zones in a manner that defeats the intent of the system. For example, a vehicle that backs out of a space and activates the count detectors can generate a false vehicle count. Invalid counts can also be generated by pedestrians, baggage carts, bicycles and various other foreign objects that enter the detection zones. The Contractor shall provide and install appropriate traffic delineators, such as bollards or jersey barriers, in the detection

zones to force all traffic to pass through the detection zone in a valid movement and thereby limit the number of invalid counts.

4. During acceptance testing, each detection zone shall count valid vehicle movements with 100% accuracy over the testing period. The minimum number of vehicle counts to establish passing test criteria during a single lane test shall be 250 vehicle movements.

5. The entire PSCS, including the available spaces displayed to the patrons on PSCS signage, shall maintain 95% accuracy over a 24 hour period for each level and facility as a whole regardless of traffic volume. The accuracy shall be calculated by taking the difference between a real-time physical inventory and the occupancy reported by the PSCS and dividing it by the capacity for the respective level or facility. The 5% allowable error is inclusive of all invalid counts, improper lane delineation, and human error associated with manual counts.

BB. Processing Times

1. The Parking Program shall achieve the allowable processing times listed below:

    f. Report generation for data less than 12 months old: less than 15 seconds

    g. Report generation for data 12 months or older: less than 30 seconds

    h. Credit card authorizations sent and returned: less than four seconds, The Contractor shall provide HMC with the speed of connection that is required to allow credit card authorizations to be sent and returned within four seconds or less, even at peak times and accounting for 150% increase in transactions. HMC shall coordinate with the Contractor to increase the available bandwidth as necessary.

    i. At vehicle entry, the total elapsed time from the point a vehicle triggers the picture capture zone to the point where the LPR Subsystem submits a valid LPN into the database shall not exceed two seconds for any single event.

    j. At vehicle exit, the total elapsed time from the point a vehicle triggers the picture capture zone to the point where the LPR Subsystem communicates a successful or unsuccessful correlation message to the exit lane shall not exceed two seconds for any single event.

CC. Web Solutions

    a. The vendor shall offer Web development solutions for an e-commerce and customer inquiry website.

    b. The vendor shall offer packaged solutions and custom development options.

    c. The vendor shall develop a scope document outlining the work to be

performed and offer a firm price.

d.   The e-commerce solution shall include a PA-DSS validated credit card solution.

e.   The e-commerce Web site shall be easily maintained using a 'dashboard'-like administrative console.

f.   The e-commerce solution shall not utilize cookies to store any information other than user and session information via application web servers.

g.   The e-commerce solution shall support expiration of cookies at end of session by logging off the application and closing the browser.

h.   The e-commerce Web site shall integrate with the parking system database.

i.   The following e-commerce solutions shall be made available:

    i.   Customer Account Inquiry
    ii.   Citation Payments
    iii.   Permit Sales
    iv.   Permit Waitlist
    v.   Citation Appeals
    vi.   Validation Sales (including paperless validations, barcode validations, and printable non-barcode validations)

2.07. EQUIPMENT AND SUBSYSTEM PERFORMANCE STANDARDS

A. The system shall perform accurate calculations including:

1.   parking fees
2.   transaction counts
3.   Lot Utilization
4.   revenue processing
5.   reporting

B. The system shall calculate parking fees based upon different parking areas, time/day of entry, applicable taxes, lengths of stay, time increments and rate structures

C. Parking Space Count System Performance

1.The PSCS shall operate in real-time with the PRCS. The count signals shall be received within one second from the event. The number of vehicles parking in

a facility recorded by the PSCS and the PRCS shall be the same. The Contractor shall assure HMC that the occupancy levels do not "drift" or "balloon" from having the same count number among the LPR, LPI, PRCS, and the PSCS for valid counts.

2. The workstation's display and dynamic signage displays shall be updated by the PSCS every ten seconds. This frequency shall be user configurable.

3. The PSCS shall count passing vehicles that cross the vehicle detection zones in a valid vehicular movement with 100% accuracy. Invalid counts include vehicles or other objects that enter detection zones in a manner that defeats the intent of the system. For example, a vehicle that backs out of a space and activates the count detectors can generate a false vehicle count. Invalid counts can also be generated by pedestrians, baggage carts, bicycles and various other foreign objects that enter the detection zones. The Contractor shall provide and install appropriate traffic delineators, such as bollards or jersey barriers, in the detection zones to force all traffic to pass through the detection zone in a valid movement and thereby limit the number of invalid counts.

4. During acceptance testing, each detection zone shall count valid vehicle movements with 100% accuracy over the testing period. The minimum number of vehicle counts to establish passing test criteria during a single lane test shall be 250 vehicle movements.

5. The entire PSCS, including the available spaces displayed to the patrons on PSCS signage, shall maintain 95% accuracy over a 24 hour period for each level and facility as a whole regardless of traffic volume. The accuracy shall be calculated by taking the difference between a real-time physical inventory and the occupancy reported by the PSCS and dividing it by the capacity for the respective level or facility. The 5% allowable error is inclusive of all invalid counts, improper lane delineation, and human error associated with manual counts.

D.   Processing Times

1. The Parking Program shall achieve the allowable processing times listed below:

   a. Report generation for data less than 12 months old: less than 15 seconds
   b. Report generation for data 12 months or older: less than 30 seconds
   c. Credit card authorizations sent and returned: less than four seconds, The Contractor shall provide HMC with the speed of connection that is required to allow credit card authorizations to be sent and returned within four seconds or less, even at peak times and accounting for 150% increase in transactions. HMC shall coordinate with the Contractor to increase the available bandwidth as necessary.
   d. At vehicle entry, the total elapsed time from the point a vehicle triggers the picture capture zone to the point where the LPR

Subsystem submits a valid LPN into the database shall not exceed two seconds for any single event.

  e. At vehicle exit, the total elapsed time from the point a vehicle triggers the picture capture zone to the point where the LPR Subsystem communicates a successful or unsuccessful correlation message to the exit lane shall not exceed two seconds for any single event.

2.08 SOURCE QUALITY CONTROL

A. Internal Contractor Tests

  1. All equipment shall have successfully passed formal manufacturing tests and quality assurance inspections to validate compliance with the Contract prior to the start of the FAT. Records for formal internal Contractor testing and inspection for performance, materials quality and/or workmanship shall be maintained by the Contractor and made available if so requested by HMC prior to the start of any acceptance test.

  2. Contractor shall have readily available proof of product reliability analysis and testing should reliability become a problem at any time from the beginning of installation testing through the final operational test period.

B. Factory Acceptance Test (FAT)

  1. A FAT shall be conducted to verify the functional performance of all systems, subsystems, and components of the Parking Program to ensure adherence to these Functional Specifications, prior to installing any equipment at HMC.

  2. To verify that all the functionalities described within these Functional Specifications are achieved, the Contractor shall demonstrate the performance of the Parking Program at a location mutually agreed upon by HMC and the Contractor. Generally, the FAT takes place at the Contractor's manufacturing facility or central distribution center. As part of the FAT, the Contractor shall configure a lane of each type with all applicable components, or stand-alone device if the particular device is not part of an entry/exit lane (e.g. server, workstations, etc.), to simulate the configuration as installed at HMC. The Contractor shall provide all ancillary items necessary to complete the FAT including setting up a credit card test bed for testing purposes; supply credit cards of all types for testing; provide all ticket and ticketless media needed for each transaction type; and provide all keys to access equipment housings.

3. All systems, subsystems, and components of the system shall successfully complete a FAT prior to the shipment of any equipment to the project site.

4. No equipment that has failed the FAT shall be installed at the HMC.

5. The FAT shall be considered successfully completed when all systems, subsystems, and components have passed their respective test procedures and all test documents have been signed by HMC and the Contractor. Minor deviations shall not be considered grounds for failure of the FAT. Major deviations found during the FAT shall result in the retest of the respective equipment, software, or subsystem before the FAT is considered successfully complete.

6. The Contractor shall provide HMC a plan for the FAT in accordance with the submittal guidelines. Test procedures shall be provided for each lane type or device type and test procedures shall include:

   a. narrative describing the general procedures to be followed;
   b. definition of all minor and major deviation types;
   c. checklist of all items necessary to conduct the test (e.g. unpaid tickets, exceptions tickets, credit cards, transponders, equipment keys, etc.);
   d. checklist for the components of each lane or device;
   e. signature page for all FAT participants' signatures;
   f. step by step instructions for testing each functionality;
   g. tests for verifying reports;
   h. area within each test section to denote "pass" or "fail"; and
   i. section for listing and describing test deviations.

7. The FAT shall be observed by HMC representatives. All necessary arrangements associated with HMC representatives attending the FAT shall be accomplished by the Contractor including the cost of travel, meals, lodging, and local transportation.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Site Verification of Conditions: The Contractor shall verify all existing conditions in the field prior to implementation. In the event that conditions in the field are different from the existing conditions described and shown in the Contract, the Contractor shall notify HMC in writing of the exact differences, and shall inform HMC in writing of any implications the differences have on the project.

3.02   INSTALLATION

A. During implementation and the warranty period, HMC shall attempt to make available to the Contractor an area to serve as an office/work area for the technicians that shall support the system. It is the responsibility of the on-site technicians to keep the office/work area clean and free of all hazards.

B. Contractor shall follow the appropriate HMC security procedures to obtain security badges for all personnel who perform regular work at the HMC. Contractor shall be responsible for all fees associated with the badging process. Contractor shall be responsible to maintain badge validity in accordance to the rules and regulations of the HMC's badging office.

C. During implementation and testing, on-line, real-time communication between the Parking Program servers and the Contractor's software support team for supporting and configuring the system is required. This communication shall be via a HMC-provided VPN connection and shall be required to go through the firewall to get onto HMC's network and thence to the Servers. Contractor shall go through HMC IT clearance process in order to gain VPN access.

D. Any patches, upgrades, updates, or modifications to the software during the installation period shall require appropriate documentation and approval before the modification is made.

E. Equipment Installation

   1. The Contractor shall verify that the installation location is prepared and ready to have the installation completed. The Contractor shall notify, in writing, HMC if the Contractor finds that the installation location is not prepared for installation due to unfinished work outside of the Contractor's scope of work. The written notification shall provide detail of the elements that are in need of modification in order to prepare the location for equipment installation.

F. Interface with Work Provided by Others or Existing Elements

   1. Removal and proper Disposal of Existing Equipment: The Contractor shall be responsible for removal of all existing equipment with no interference to ongoing revenue activity that is replaced under this project. Contractor shall disassemble, uninstall and transport removed equipment to a HMC-designated location for storage and retention by HMC. Contractor shall be responsible for repairing any damages that occur to existing components during the removal and transport processes. HMC shall specify a storage location, on HMC premises, for the removed equipment following Contract Award.

3.02   FIELD QUALITY CONTROL

A. Lane Acceptance Tests (LAT)

1.   LATs shall be conducted by the Contractor as a demonstration to HMC or its representatives that the installed equipment complies with the Contract, the Contractor's shop drawings, and to other documentation, such as user manuals.

2.   After successful completion of the FAT the equipment, software, and subsystems may be installed at the HMC. When a lane installation has been completed, the Contractor shall conduct its internal testing of the installed equipment. Internal testing shall follow the identical LAT test procedures that shall be used during LATs observed by HMC.

3.   Upon successful completion of the Contractor's test, the Contractor, and HMC shall perform the LAT to verify performance. The LAT shall only be observed by HMC after a fully completed and signed test script verifying successful completion of the Contractor's internal testing is submitted. Signed internal test scripts shall be submitted at least one calendar day prior to the scheduled test with HMC.

4.   LATs shall be conducted at the HMC for each lane and/or device. The Contractor shall not activate any lane or device for service until its LAT has been successfully completed, and HMC has notified the Contractor that it is ready to put the equipment in operation.

5.   The Contractor shall provide test procedure documents for LATs in accordance to the submittal guidelines. LAT Test Procedures Documents shall be provided for each lane type or device type and test procedures shall include the following sections:

a.   narrative describing the general procedures to be followed;
b.   definition of all minor and major deviation types;
c.   checklist of all items necessary to conduct the test (e.g. unpaid tickets, exceptions tickets, credit cards, transponders, equipment keys, etc.);
d.   checklist for the components of each lane or device;
e.   signature page for all LAT participants' signatures;
f.   step by step instructions for testing each functionality;
g.   tests for all patron processing procedures;
h.   tests to ensure that the proper rate structures are being used;
i.   tests for verifying the reporting requirements;
j.   area within each test section to denote "pass" or "fail"; and
k.   section for listing and describing test deviations.

6.   The Contractor shall provide all ancillary items necessary to complete the LATs for testing purposes; supply credit cards of all types for testing;

provide all ticket and ticketless media needed for each transaction type; and provide all keys to access equipment housings. In addition, the Contractor shall make available sufficient personnel to perform the LAT in an efficient and timely manner.

7. The LAT shall be considered successfully completed when all components have passed their respective test procedures and all test documents have been signed by HMC and Contractor. Minor deviations resulting in the creation of punch list items shall not be considered grounds for failure of the overall LAT.   Major deviations found during the LAT shall result in the retest of the lane. The Contractor shall agree to credit HMC from its total contract value for any travel and/or labor costs incurred by HMC as a result of retesting a failed lane.

B.   Site Acceptance Tests (SAT)

1.   The Site Acceptance Tests shall test each parking facility's equipment installation as a system, e.g., all entry lanes, exit lanes, communication to the workstations, and Servers. The Site Acceptance Test is a pass/fail test that relies upon the operation and status of equipment and system reports of an individual facility. HMC and the Contractor shall collectively select an "initial start-up date" for each Site Acceptance Test. Site Acceptance Tests shall run for seven days beginning at the initial start-up date and continuing for seven consecutive 24-hour periods. Site Acceptance Tests shall be performed for each individual facility only after all LATs in a parking facility have been successfully completed.

2.   During a Site Acceptance Test only routine maintenance procedures, as defined by the preventative maintenance manual and according to industry standards, shall be permitted. All other maintenance procedures shall be approved in writing by HMC before they are performed; otherwise, they shall constitute a failure of the Site Acceptance Test and a mandatory restart.

3.   HMC reserves the right to be present for all maintenance services during the Site Acceptance Tests.

4.   The Contractor shall submit a Site Acceptance Test Procedures Document in accordance with the submittal requirements. Site Acceptance Test Procedures Documents are intended to outline procedures for monitoring the overall performance of the system and shall not include test procedures for individual lanes or components. The Site Acceptance Test Procedures Document shall include:

a.   narrative describing the general procedures to be followed;
b.   methodology for calculation of downtime for the various components; and
c.   electronic tracking document to be used during the Site Acceptance Test period for documenting failures and downtime.

5.   The performance criteria for successful completion of the Site Acceptance Test shall include:

   a.   All subsystems listed below shall be operationally available 100% of the time during the seven day test period:

      (1)   Application Server
      (2)   Data Server
      (3)   Credit card authorization system
      (4)   Data communication system
      (5)   Workstations
      (6)   Permitting Program
      (7)   Web-site access
      (8)   Entry Lane
      (9)   Exit Lane
      (10)   LPR System
      (11)   Mobile LPR vehicle/system
      (12)   Handheld Event cashiering computer
      (13)   Handheld Citation computer
      (14)   Proximity Card Access System
      (15)   Intercom System

   b.   If any single component fails more than once during the seven day period, it shall be replaced upon the second failure with a newly manufactured component of the same type.
   c.   No component of a given type (e.g., cashier stations, exit stations, barrier gates, entry stations, etc.) shall fail more than two times during the seven day test period for the same reason. Upon the third failure all components of that type shall be replaced or modified to correct the common deficiency and the test restarted from the beginning.

6.   In addition to the comprehensive reports generated during the Site Acceptance Tests, the Contractor shall provide to HMC a one page summary report that clearly provides the overall percentage of system downtime and causes of that down time during each test.

7.   The Contractor shall provide to HMC a corrective action report that provides a detailed description of each failure that occurs during each Site Acceptance Test. The corrective action report shall include the type of failure, why the failure occurred, what was done to remedy the failure, and whether or not the failure resulted in a restart of the Site Acceptance Test.

8.   All reports shall be 100% accurate and be reconcilable against each other for the seven day testing period otherwise the test shall be deemed a failure, problems shall be corrected, and the test shall be restarted from the beginning.

C. Operational Demonstration Test (ODT)

1. The ODT shall be comprised of all equipment, systems, and subsystems performing under actual conditions, e.g., patron use, normal activity recording, and reporting procedures. This ODT shall demonstrate, over a period of 30 consecutive calendar days, the successful performance of all aspects of the Parking Program system.

2. During the ODT only routine maintenance procedures, as defined by the preventative maintenance manual and according to industry standards, shall be permitted. All other maintenance procedures shall be approved in writing by HMC before they are performed; otherwise, they shall constitute a failure of the ODT and a mandatory restart.

3. HMC reserves the right to be present for all maintenance services during the ODT.

4. For purposes of the ODT, a subsystem is defined to be any one of the following:

    a. Application Servers
    b. Data Servers
    c. Permitting Program
    d. Web-site access
    e. Credit card authorization system
    f. Data communication system
    g. Workstations
    h. Entry Lane
    i. Exit Lane
    j. Handheld Citation computer
    k. Proximity Card Access System
    l. Intercom System

5. The ODT shall begin after all facilities have successfully completed their respective Site Acceptance Tests on a date mutually selected and agreed to in writing by HMC and the Contractor at a time designated by HMC. The ODT monitors system performance of the entire system operating as a single unit. The Contractor shall submit an ODT Test Procedures Document in accordance with the submittal requirements. ODT Test Procedures Documents are intended to outline procedures for monitoring the overall performance of the Parking Program and shall not include test procedures for individual lanes or components. The ODT Test Procedures Document shall includes:
    a. narrative describing the general procedures to be followed;
    b. methodology for calculation of downtime for the various components; and
    c. electronic tracking document to be used during the ODT period for documenting failures and downtime.

6.   The ODT shall continue for 30 consecutive 24-hour periods during which all the performance criteria, stated below, shall have been met. If during the 30 day period the system fails to meet any one of the following specified performance criteria, the test shall begin anew on a day agreed upon by HMC and the Contractor. The Contractor shall agree to credit HMC from its total contract value for any travel and/or labor costs incurred by HMC as a result of retesting the system.

7.   The performance criteria for successful completion of the ODT shall include:

   a.   No individual subsystem shall be operationally unavailable for four or more hours cumulative during the 30 day test period.
   b.   No individual subsystem shall be operationally unavailable for more than two consecutive hours.
   c.   If any single component fails more than once during the 30 day period for the same reason, it shall be replaced upon the second failure with a newly manufactured component of the same type and the test shall continue.
   d.   No component of a given type (e.g., cashier station, exit station, barrier gate, entry station, etc.) shall fail more than three times during the 30 day test period for the same reason. Upon the fourth failure all components of that type shall be replaced to correct the common deficiency, and the test shall be restarted from the beginning.

8.   In addition to the comprehensive reports generated during the ODT, the Contractor shall provide to HMC a one page summary report that clearly provides the overall percentage of system downtime and causes of that down time.

9.   The Contractor shall provide to HMC a corrective action report that provides a detailed description of each failure that occurs during the ODT. The corrective action report shall include the type of failure, why the failure occurred, what was done to remedy the failure, and whether or not the failure resulted in a restart of the ODT.

10.   All reports shall be 100% accurate and can be reconciled against one another over the 30 day testing period, otherwise the test shall be deemed a failure, problems shall be corrected and the test restarted.

11.   A subsystem shall be considered unavailable as long as any major component of the subsystem is not functioning. As an example, the major components of an entry lane include but are not limited to:

   a.   Lane Open/Closed Signs
   b.   Vehicle detector devices
   c.   Intercom
   d.   Barrier gate

     e.   Entry Station
     f.   Proximity Card Reader
     g.   Handheld Citation computer
     h.   Data communication
     i.   Power supply

12.   An inoperative subsystem shall not be deemed unavailable if it has become inoperative because of:

     a.   Outage of line power beyond required duration of UPS power backup;
     b.   Malicious damage or vandalism to a component(s) by employees, patrons or others;
     c.   Routine parking operational issues such as ticket jams;
     d.   Network connectivity issues beyond the Parking Program;
     e.   Failures due to HMC provided equipment issues and/or failures;
     f.   Failures caused by a 3rd party; or
     g.   Act of God.

13.   Should a failure occur in the system that is caused by normal hardware failure, it shall be repaired and the test resumed with downtime accrued. Where the failure causes inadequate test data to be collected or a loss of test data, then the test shall be restarted from a point where it can be successfully completed with data to verify compliance with the Contract and the test procedures document.

14.   If the system "crashes" during a test, then the test shall be stopped. "Crash" is defined as a failure in which the system cannot properly process revenue transactions. The Contractor shall analyze the cause of the system "crash," document the cause in a system problem report, responsively repair the flaw, and document the repair in a corrective action report.

15.   Where corrective action impacts delivered documentation, the documentation shall be corrected prior to final acceptance. Only after Contractor has repaired flaw and HMC accepts corrective action and the flaw report can the test be restarted.

16.   Upon formal written approval of the corrective action report by HMC, testing may continue if a problem has been encountered as long as the Contractor can clearly demonstrate that the failure is associated only with one function of the system, corrective action has been taken to remedy the failure, and the corrective action shall not impact other areas of the system.

17.   Where the system does not perform a function or incorrectly performs the function but the system does not crash, testing may continue, as long as the function is corrected and the following conditions are met:

a.   the functionality of entry/exit lanes and parking time works properly according to the Contract,

b.   the functionality of parking fee calculations and correct collection works according to the Contract;

c.   no personnel, vehicle or driver safety issues exist;

d.   transactional archiving operates in accordance with the Contract;

e.   failure does not cause loss or contamination of transactional data; and

f.   reports balance and are 100% accurate.

18.   Where the above criteria are not met, the test shall be stopped and corrective action taken and verified prior to testing restart.

19.   During the test, the continued availability of the system shall be demonstrated. Where a failure occurs that causes data loss, system instability (crash), and/or contamination of the transactional data and the database, the Contractor shall immediately correct the problem. Testing shall continue until a consecutive 30 day period of stable operation is achieved. Stability is defined as the proper functioning of the system with a failure having no impact on the continued system operation or on the integrity of transactional data.

D. Punch List

1.   Starting with the first week after completing the FAT through final system acceptance, the Contractor shall submit a document on a weekly basis showing the status of all outstanding system issues, regardless of severity, including the plan for resolution and estimated completion date.

E.   Final System Acceptance

1.   Final System Acceptance will be submitted by HMC, in writing to the Contractor, upon successful completion of the FAT, all LATs, all SITE ACCEPTANCE TESTs, the ODT, and upon verification by HMC of complete resolution of all outstanding items on the punch list.

3.04   INSTRUCTION AND TRAINING

A.   By means of instructional classes augmented by individual instruction as necessary, the Contractor shall fully instruct HMC's designated staff in the operation, adjustment, and maintenance of all products, equipment, and systems. Should implementation be completed in phases, instructing HMC personnel shall also be phased to correspond with deployment of the various components.

B.   Scheduling of instruction classes shall be coordinated by the Contractor and HMC personnel to avoid conflicts and peak-period personnel demands. The Contractor shall submit a proposed instruction schedule at a joint meeting

conducted prior to equipment installation. HMC shall tentatively approve or suggest changes to the training schedule at that time. Forty five calendar days prior to each instruction session, the Contractor shall submit an outline of the instruction material and approximate duration of the session. Ample time shall be allotted within each session for the Contractor to fully describe and demonstrate all aspects of the Parking Program, and allow HMC personnel to have hands-on experience with the Parking Program.

C. The training groups, the approximate number of staff to be instructed in each group, and the number of classes for each group are as follows:

1. Cashiers

   a. There will be approximately 15 cashiers who shall be trained in the general operation of the Parking Program and LPR equipment, with each cashier participating in two sessions. The first series of classes shall be conducted in the four weeks immediately before installation and activation of the new system and shall consist of general system introduction and basic knowledge necessary to operate the system. The second session shall be conducted shortly after each cashier has had experience with the system and LPR Subsystem in an operational mode.
   b. The length of each instruction class shall be defined in the Contractor's curriculum as approved by HMC. Each block of instruction shall be provided at approximately five different time periods including all shifts (day, swing, and graveyard) with the same block of instruction in each to ensure all staff can participate without undue loss of staffing for normal operations.
   c. Initially, all cashiers shall be instructed by the same personnel and with the same processes.
   d. A cashier's instruction terminal shall be provided to HMC. This terminal shall be used during the instruction classes and left with HMC for the instructing of future cashier staff.

2. Supervisors:

   a. There will be approximately 6 supervisory personnel who shall be instructed in the operation of all components of the system, with each Supervisor participating in two sessions. The first series of classes shall be conducted in the four weeks immediately before installation and activation of the new equipment and shall consist of a detailed system introduction and detailed knowledge necessary to operate the systems. The second session shall be conducted shortly after each Supervisor has had experience with the new systems in an operational mode and shall include training on conducting minor repairs to field devices, up to but excluding board level repairs.
   b. The length of each instruction class shall be defined in the Contractor's curriculum as approved by HMC. Each instruction

block shall be provided in a minimum of two classes, each covering the same material, and scheduled to ensure all personnel can attend one of the classes without undue disruption of normal work schedules.

    c.   The instruction shall emphasize both hardware and software.

    d.   Initially, all supervisory personnel shall be instructed by the same personnel and processes.

3. System Administrators:

    a.   There will be approximately 5 system administrators who shall be instructed in system administration and software.

    b.   The length of each instruction class shall be defined in the Contractor's curriculum as approved by HMC. Each instruction block shall be provided in a minimum of two classes, each covering the same material, and scheduled to ensure all personnel can attend one of the classes without undue disruption of normal work schedules.

4. Office Staff/Sales Consultants

    a.   There will be approximately 5 sales consultants and managers who shall be instructed in system operations, administration, and software features. Instruction of the office staff/accounting/audit personnel shall commence in the four weeks immediately before activation of the new system and all its elements.

    b.   The length of each instruction class shall be defined in the Contractor's curriculum as approved by HMC. Each instruction block shall be provided in a minimum of two classes, each covering the same material, and scheduled to ensure all personnel can attend one of the classes without undue disruption of normal work schedules.

5. Office Staff/Enforcement Adjudicators

    c.   There will be approximately 5 accountants, auditors and managers who shall be instructed in system operations, administration, and software features. Instruction of the office staff/accounting/audit personnel shall commence in the four weeks immediately before activation of the new system and all its elements.

    d.   The length of each instruction class shall be defined in the Contractor's curriculum as approved by HMC. Each instruction block shall be provided in a minimum of two classes, each covering the same material, and scheduled to ensure all personnel can attend one of the classes without undue disruption of normal work schedules.

6. Office staff/Accounting:

   a. There will be approximately 5 accountants, auditors and managers who shall be instructed in system operations, administration, and software features. Instruction of the office staff/accounting/audit personnel shall commence in the four weeks immediately before activation of the new system and all its elements.
   b. The length of each instruction class shall be defined in the Contractor's curriculum as approved by HMC. Each instruction block shall be provided in a minimum of two classes, each covering the same material, and scheduled to ensure all personnel can attend one of the classes without undue disruption of normal work schedules.

D. All instruction courses shall consist of classroom instruction and actual "hands-on" experience. Classes shall be set up in a room designated by HMC. The Contractor shall provide one instructor for the duration of each program. The instructor shall speak fluent English in a clear and precise manner. The Contractor shall submit resumes for each proposed instructor. HMC reserves the right to request replacement instructors.

E. Class content shall be coordinated and developed with HMC so that procedures for all transaction types are included. The class material shall include schematics, as well as an overview and descriptions of the equipment. HMC reserves the right to videotape all training sessions for future instruction purposes or Contractor shall supply video demos if available.

F. Contractor shall include "Training the Trainer" as part of the Training Plan. HMC trainers and supervisors shall be trained and participate in teaching the training classes. Contractor shall be responsible for training all HMC trainers and supervisors as part of "Training the Trainer." Contractor shall train up to five (5) HMC trainers and supervisors.

G. HMC shall have authority to copy and distribute training materials at its discretion. HMC requires the written permission from the Contractor or any third party to reproduce, modify, and print all training material, including copyrighted material, ninety (90) calendar days prior to training.

H. Contractor shall submit Three (3) printed sets of all training documents for HMC review.

I. The Contractor shall provide all documentation required for instructing HMC personnel. Documentation shall be provided for each student in the form of workbooks, lecture notes/overheads, and manuals for student markup. The Contractor-supplied instruction documentation shall be sufficiently detailed so that the user can in most cases resolve issues. HMC retains the right to copy training materials as frequently as required for ongoing internal use only.

J. An instructional notebook or user's manual shall accompany every instruction course. The Contractor shall submit a hardcopy of the user's manual per the submittal guidelines. The Contractor shall supply Ten (10) bound, hardcopies of each user manual type: cashier, supervisory, image reviewer, system administrator, technician, audit and accounting, etc. In addition, all manuals (instruction and maintenance) shall be submitted in electronic format (.PDF) on a CD-ROM or DVD. Two copies of CD-ROM/DVDs shall be supplied. The user's manuals shall be written in common English with appropriate photos, diagrams, and schematics to supplement the text. HMC reserves the right to prepare additional copies of the course materials as needed.

K. At the completion of instruction courses, all HMC staff that completes the course shall receive a Certificate of Successful Completion.

3.05 EQUIPMENT PROTECTION

A. All equipment components shall be protected from damage by vehicular movements by protective bollards or other barriers as recommended by the Contractor.

B. Each island-mounted device shall be protected by one or more bollards.

3.06 EQUIPMENT LOCATIONS

A. The Intercom system, printers, etc., shall reside in the Parking Offices.

B. The Server(s) shall be installed in one or more HMC IT data centers as directed by HMC.

C. Lane Equipment: The following is a listing of lane equipment and quantities, by location, that is to be installed by the Contractor as part of the project.

Facility	Entries	Exits	Loops	Ticket Dispenser	Column	Prox Reader	Cashier Terminal	Intercom	Gate	APS
P-1 ViewPark	2	2	10	2	4	4	2	4	4	1
P-2 NJB	2	3	12	2	4	5	1	5	5	1
P-3 PSB	2	1	8	1	1	3	1	3	2	
P-4 Boren	1	1	4			2		2	2	
8th avenue lobby							2			
8th Avenue Parking office						1	1			
Total	7	7	34	5	9	15	7	14	13	2

1. P-1   View Park Garage

    a.   Proximity Card Readers: 4
    b.   Intercoms: 4
    c.   Barrier Gates: 4
    d.   Ticket Dispenser: 2
    e.   Exit Column: 2
    f.   Cashier Terminal
    g.   UPS: 4
    h.   Vehicle Detection Devices (Loop): 10
    i.   Remote Payment Devices (POF): 1

2. P-2   NJB Garage:

    a.   Proximity Card Readers: 5
    b.   Intercoms: 5
    c.   Barrier Gates: 5
    d.   Ticket Dispenser: 2
    e.   Cashier Terminal
    f.   Exit Column: 2
    g.   UPS: 5
    h.   Vehicle Detection Devices (Loop): 12
    i.   Remote Payment Devices (POF): 1

3. P-3   Patricia Steele Garage:

    a.   Proximity Card Readers: 3
    b.   Intercoms: 3
    c.   Barrier Gates: 2
    d.   Ticket Dispenser: 1
    e.   Cashier Terminal
    f.   Exit Column: 1
    g.   UPS: 3
    h.   Vehicle Detection Devices (Loop): 6
    i.   Remote Payment Devices (Multi-Space meters): 1

4. P – 4   Boren Garage:

    a.   Proximity Card Readers: 2
    b.   Intercoms: 2
    c.   Barrier Gates: 2
    d.   UPS: 2
    e.   Vehicle Detection Devices (Loop): 4

5. 8th Avenue Lobby:
    e.   Cashier Terminal: 2

6.   8th Avenue Building Parking Office:

    f.   Cashier Terminal: 1
    g.   Proximity Card Reader: 1

- END OF SECTION -

APPENDIX 1

See Map Attachment

3.3   <u>INSURANCE REQUIREMENTS</u>

See Terms and Conditions

4.1 PROPOSER LIST AND QUALIFICATION EVALUATION

After the established date for receipt of proposals, a listing of vendors submitting proposals will be prepared, and will be available for public inspection. Qualifications and proposals submitted by interested vendors will be reviewed and evaluated based on the evaluation factors set forth in the RFP.

4.2   PROPOSAL CLASSIFICATION

For the purpose of conducting discussions with individual offerers, if required, proposals will initially be classified as:

        A.   Acceptable
        B.   Potentially Acceptable
        C.   Unacceptable

Discussions may be conducted, if required, with any or all of the proposers whose proposals are found acceptable or potentially acceptable. Offerers whose proposals are unacceptable will be notified promptly. The Administrative Director of Procurement Services and Resource Management will establish procedures and schedules for conducting oral and/or written discussions.

Vendors are advised Harborview Medical Center may award a contract on the basis of initial offers received, without discussions; therefore, each initial offer should contain the offerer's best terms from a cost or price and technical standpoint.

4.3   VENDOR INVESTIGATION

Harborview Medical Center will make such investigations as it considers necessary to obtain full information on the vendors selected for discussions.

4.4   FINAL OFFERS AND AWARD OF CONTRACT

Following any discussions with proposers regarding their technical proposals, alternative approaches or optional features, a number of the firms may be requested to submit best and final offers. Harborview Medical Center will rank the final vendors for the project, giving due consideration to the established evaluation criteria. The committee will recommend award to the proposal that is found to be most advantageous to Harborview Medical Center based on the factors set forth in the Request for Proposals.

SECTION 5 - EVALUATION PROCESS/CRITERIA

5.1   EVALUATION PROCESS

A committee that consists of members from the Harborview's Safety division and other areas of the medical center will evaluate all acceptable proposals based on the criteria identified. Proposals will be rated using a weighted point scheme, and then ranked. The proposal receiving the highest ranking will be declared the most advantageous to Harborview Medical Center.

5.2   EVALUATION CRITERIA

The evaluation criteria are listed below:

Technical Approach and Methodology

Proposer's approach to providing this service, timetable and work plan that addresses the specific technical specifications and information as described in Section 2.2 D.

Project Team and Management Structure

Experience and qualifications of the agency's personnel as described in Section 2.2 E

Proposal Cost

The rate for providing this service as described in Section 2.2 F.

Agency Experience and Credentials

Proposer's relevant experience and expertise in providing these services as described in Section 2.2 G.

References

The results of the references as described in Section 2.2 H

SECTION 6 - GENERAL CONTRACTUAL TERMS AND CONDITIONS

UW MEDICINE
GENERAL TERMS AND CONDITIONS

1. DEFINITIONS – "Contract" means the written agreement between UW Medicine and the Contractor into which these General Terms and Conditions have been incorporated by reference. Other defined terms herein have the same meaning as in the Contract.

2. ASSIGNMENT – The work to be provided under this Contract, and any claim arising thereunder, is not assignable or delegable by Contractor without prior written consent the Hospitals.

3. CORPORATE COMPLIANCE PLAN – The University of Washington's (UW's) Corporate Compliance Plan is designed to ensure that UW complies with federal, state and local laws and regulations. It focuses on the promotion of good corporate citizenship, including a commitment to up-hold the highest standard of ethical and legal business practices, and the prevention of misconduct. As this Contract involves certain components of the UW, Contractor agrees to conduct all business transactions that occur pursuant to this Contract in accordance with applicable laws, regulations and UW compliance policies, and ensure that Contractor's officers, employees and agents do the same. UW, may if it so chooses, deem any compliance violation to be a material breach of this Contract.

4. CONFIDENTIALITY – Nothing in this contract shall prohibit any UW Medicine Component Unit from sharing confidential information with other UW Medicine Component Units as so defined on page 1 of this Contract.

5. CONFLICT OF INTEREST – Notwithstanding any determination by the Executive Ethics Board or other tribunal, Hospitals may, in their sole discretion, by written notice to the Contractor terminate this contract if it is found after due notice and examination by Hospitals that there is a violation of the Ethics in Public Service Act, Revised Code of Washington ("RCW") 42.52; or any similar statute involving the Contractor in the procurement of this Contract, or provision of products under this Contract.

If the contract is terminated as provided above, Hospitals shall be entitled to pursue the same remedies against the Contractor as they could pursue in the event of a breach of the contract by the Contractor. The rights and remedies of Hospitals provided for in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law.

The Contractor shall exert all reasonable effort to advise Hospitals, at the time of delivery of products furnished under this contract, of all known or potential invasions of privacy contained therein and of any portion of such document that was not produced in the performance of this contract. Hospitals shall receive prompt written notice of each notice or claim of copyright infringement received by the Contractor with respect to any data delivered under this contract. Hospitals shall have the right to modify or remove any restrictive markings placed upon the data by the Contractor.

6. <u>COVENANT AGAINST CONTINGENT FEES</u> – The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except a bona fide employee or agency, as defined in the Federal Acquisition Regulations ("FAR") Subpart 3.4. Hospitals shall have the right, in the event of breach of this clause by the Contractor, to annul this contract without liability or, in their discretion, to deduct from the contract price or consideration or recover by other means the full amount of such commission, percentage, brokerage, or contingent fee.

7. <u>DELIVERY</u> – For any exceptions to the delivery date as specified on this order, Contractor shall give prior notification and obtain approval thereto from each respective Hospital's Purchasing department, as appropriate. With respect to delivery under this order, time is of the essence and order is subject to termination for failure to deliver on time. The acceptance by a Hospital of late performance with or without objection or reservation shall not waive the right to claim damage for such breach nor constitute a waiver of the requirements for the timely performance of any obligation remaining to be performed by the Contractor.

8. <u>DELIVERY RESTRICTIONS</u> – Contractor shall comply with all Hospital parking instructions, oral and written, and park in designated parking areas.

9. <u>EQUAL OPPORTUNITY</u> – In accordance with Title VI and Title VII of the Civil Rights Act of 1964, 42 U.S.C. 2000d through 42 U.S.C. 2000d-4 and 42 U.S.C. 200e, et seq., and the relevant federal regulations adopted pursuant to Title VI, Contractor assures that it shall not discriminate against any company, subcontractor, employee, or other person on the grounds of race, color, sex, or national origin under this contract or under any project, program, or activity supported by this contract. Contractor agrees that Hospitals may withhold payments to the Contractor under this contract until the Contractor complies with the Title VI and Title VII requirements, or may cancel, terminate, or suspend the contract, in whole or in part. Contractor further agrees that it will comply with the Age Discrimination Act of 1975, 42 USC 6101, et.seq., and Presidential Executive Orders 11246 and 11375, as amended, and agrees that the equal opportunity clause contained in the Executive Order 11246 and 11375 as amended is incorporated in this contract by reference. If this contract permits the Contractor to subcontract any part of its obligation under this contract, the Contractor shall include the provisions of this section in every subcontract.

10. <u>EQUAL OPPORTUNITY FOR INDIVIDUALS WITH DISABILITIES AND AFFIRMATIVE ACTION</u> – Contractor certifies that it will comply with Sections 503 and 504 of the Rehabilitation Act of 1973, 29 U.S.C. § 793 and 794, as amended, and the Americans with Disabilities Act of 1990, 42 U.S.C. § 12101 et seq., regarding its programs, services, activities, and employment practices. Contractor further certifies that it will comply with the Vietnam Era Veterans Readjustment Act of 1974, as amended, and agrees that the Affirmative Action Clause contained therein is incorporated herein by reference. If this contract permits the Contractor to subcontract any part of its obligation under this contract, the Contractor shall include the provisions of this section in every subcontract.

11. <u>EXAMINATION OF RECORDS</u> – Contractor warrants that until three (3) years after final payment under this order, or for any longer or shorter period specified in FAR

Subpart 4.7, he/she shall retain records as indicated in FAR Subpart 4.7 and, upon written request, grant access to the Comptroller General or a duly authorized representative from the General Accounting Office and the right to examine any of Contractor's directly pertinent books, documents, papers or other records involving transactions related to the order as prescribed therein.

12. FORCE MAJEURE – No party shall be liable for any delay or failure to perform hereunder to the extent that such delay or failure to perform arises from causes beyond the reasonable control and without the fault or negligence of that party, including such causes as acts of God or of the public enemy, acts of a governmental body other than the Hospitals acting in either its sovereign or contractual capacity, war, explosions, fires, floods, earthquakes, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather (a "force majeure event") provided, however, that as a condition to claiming non-liability under this clause, the party claiming such non-liability shall deliver prompt written notice to the other parties of the alleged force majeure event, including a description of the force majeure event, the specific contract obligations affected by such event, whether performance of such obligations is expected to be permanently prevented or merely delayed by such event, and in the case of a delay of performance, the estimated length of such delay; and provided further that the non-liability provided hereunder shall only apply to the extent of any performance permanently prevented or delayed, and in the case of delay, only for the period of such delay.

13. FEDERAL EXCLUSION CLAUSE – Contractor represents and warrants that it is not excluded from participation and is not otherwise ineligible to participate in a "Federal health care program" as defined in 42 U.S.C. 1320a-7b (f) or in any other government payment program. If the Contractor is excluded from participation, or becomes otherwise ineligible to participate in any such program during the term for any contract, the Contractor shall notify Hospitals in writing within three (3) days after such event, and upon the occurrence of such event, whether or not such notice is given to Hospitals, Hospitals shall immediately terminate this agreement upon written notice to the Contractor. If the Contractor is an Employment Agency, the Contractor represents and warrants that its employees are not excluded from participation in a "Federal health care program" as defined in 42 U.S.C. 1320a-7b(f).

14. GOVERNING LAW – This contract shall be interpreted in accordance with the laws of the State of Washington, and the exclusive venue of any action brought hereunder shall be in the Superior Court for King County. In the event of litigation or other action brought to enforce contract terms, each party agrees to bear its own attorney's fees and costs.

15. HIPAA – Contractor agrees to comply with the Health Insurance Portability and Accountability Act to the extent applicable. If Contractor's provision of goods and services requires the use of protected health information, then UW Medicine's Business Associate Agreement (BAA) shall apply and are hereby incorporated, and acceptance of this contract constitutes acceptance of the BAA. Contractor agrees to cooperate with Hospitals in completing, to the extent necessary, any incomplete provisions of the BAA in the event it is incorporated herein.

16. INDEMNIFICATION – Contractor shall indemnify, defend, and hold the Board of Regents of the University of Washington, Hospitals, and their officers, employees, students and agents, harmless from and against all claims for damages, costs, or liability, including reasonable attorney's fees, for all injuries to persons or property arising from negligent acts or omissions of Contractor or its employees, agents, or subcontractors. (Each Hospital) shall indemnify, defend, and hold Contractor harmless against any damage, cost, or liability, including reasonable attorney's fees, for all injuries to persons or property arising from negligent acts or omissions attributable to that specific Hospital or its employees or agents. In no event shall any Hospital be required to indemnify Contractor for any injury to person or property that is not attributable to an act or omission by that specific Hospital.

17. INDEPENDENT CONTRACTOR – The parties intend that an independent contractor relationship will be created by this contract. The Contractor and his or her employees or agents performing under this contract are not employees or agents of any of the Hospitals. The Contractor will not hold himself/herself out as, or claim to be, an officer or employee of any of the Hospitals or of the state of Washington by reason hereof, nor will the Contractor make any claim of right, privilege or benefit that would accrue to a state employee under law. Conduct and control of the work will be solely with the Contractor.

18. INDUSTRIAL INSURANCE COVERAGE – To the extent applicable, the Contractor shall comply with the provisions of Title 51 RCW, Industrial Insurance.

19. INFRINGEMENTS – Contractor agrees to defend, indemnify and hold harmless Hospitals against all claims for patent, copyright, or franchising infringements arising from the purchase, installation, or use of material ordered on this Contract, and to assume all expense and damage arising from such claims.

20. INSURANCE – The Contractor shall provide evidence of the following insurance coverages, which shall be maintained in full force and effect during the term of this Contract:

1.   Commercial General Liability Insurance – Commercial general liability insurance (CGL), including contractual liability and products and completed operations coverage, with limits adequate to protect against legal liability arising out of contract activity, but in any event no less than $1,000,000 per occurrence and $3,000,000 aggregate.

2.   Automobile Liability Insurance – If Contractor's performance of this contract involves the use of vehicles, either owned, unowned OR HIRED by the Contractor, automobile liability insurance shall be required. The minimum limit for automobile liability is $1,000,000 per occurrence. A Combined Single Limit for bodily injury and property damage is acceptable.

All required insurance shall be issued by an insurance company or companies acceptable to Hospitals. CGL policies shall name the Board of Regents of the University of Washington and the University of Washington and its agents and employees as additional insureds under the insurance policy or policies.   All policies shall be primary to any other valid and collectable insurance. Contractor shall instruct the insurers to give Hospitals forty-five (45) days advance notice of any insurance cancellation. Contractor

shall submit to Hospitals within 15 days of the contract effective date, a certificate of insurance that outlines the coverage and limits defined in this section. Contractor shall submit renewal certificates as appropriate during the term of the contract.

21. LICENSING, ACCREDITATION, AND REGISTRATION – The Contractor shall comply with all applicable local, state, and federal licensing, accreditation, and registration requirements and standards, necessary for the performance of this contract.

22. LIENS, CLAIMS AND ENCUMBRANCES – Contractor warrants and represents that all the goods and products delivered herein are free and clear of all liens, claims, or encumbrances of any kind.

23. OSHA/WISHA – Contractor agrees to comply, to the extent applicable, with the conditions of the Federal Occupational Safety and Health Act of 1970 (OSHA), the Washington Industrial Safety and Health Act of 1973 (WISHA), and the standards and regulations issued thereunder and certifies that all items furnished under this order will conform to and comply with those standards and regulations. Contractor further agrees to indemnify and hold harmless Hospitals from all damages or penalties assessed against Hospitals as a result of Contractor's failure to comply with such laws, standards, or regulations and for any failure of the items furnished hereunder to so comply.

24. PAYMENT, CASH DISCOUNT – Hospitals shall not process invoices for payment, and the period of computation for cash discount will not commence, until Hospitals receive a properly completed invoice or receive and accept invoiced items, whichever is later. If an adjustment in payment is necessary due to damage or dispute, the cash discount period shall commence on the date final approval for payment is authorized. If Purchaser fails to timely pay, Contractor may charge a maximum of 1% per month on the amount overdue. Payment shall not be considered late if a check or warrant is available or mailed within the time specified, or if no terms are specified, within thirty (30) days from date of receipt of a properly completed invoice or goods, whichever is later.

UWMC utilizes a Bank of America ePayables payment method for purchase order transactions. Hospitals will be expected to accept payment via this method, if requested, at no additional charge to UWMC. . More information about the ePayables process can be found at http://f2.washington.edu/fm/ps/epayables.

NWH utilizes an American Express ePayables payment method for purchase order transactions. Contractor will be expected to accept payment via this method, if requested, at no additional charge to NWH.

HMC's preferred method of payment utilizes JP Morgan Chase Single Use Account (SUA) credit card. Contractor shall accept this expedited method of payment, if requested by HMC, and will do so at no additional charge to HMC. Additional information about the SUA may be requested by emailing hmcsua@uw.edu.

25. PRICE WARRANTY FOR COMMERCIAL ITEMS – Contractor warrants that prices charged to Hospitals do not exceed those charged by Contractor to other customers purchasing the same item in like or comparable quantities.

26. PRIVACY – Personal information collected, used, or acquired in connection with this Contract shall be used solely for the purposes of this contract. Contractor and its subcontractors agree not to release, divulge, publish, transfer, sell, or otherwise make known to unauthorized persons personal information without the express written consent of Hospitals or as provided by law. Contractor agrees to implement such physical, electronic, or managerial safeguards as may be reasonably necessary to prevent unauthorized access to personal information. Any breach of this provision may result in termination of the contract and the demand for return of all personal information. The Contractor agrees to indemnify and hold harmless Hospitals for any damages or costs, including without limitations, costs of attorneys, consultants, or other costs incurred in connection with any notification to affected individuals as Hospitals may consider reasonably necessary, related to the Contractor's unauthorized use or disclosure of personal information.

For purposes of this provision, personal information includes, but is not limited to, information identifiable to an individual that relates to a natural person's health, finances, education, business, use or receipt of governmental services, or other activities, names, addresses, telephone numbers, social security numbers, driver license numbers, financial profiles, credit card numbers, financial identifiers, and other identifying numbers.

27. PUBLICITY – The Contractor agrees to submit to Hospitals all advertising and publicity matters relating to this Contract in which, in Hospitals' judgment, Hospitals' names or the names of other UW Medicine Component Units, including the name "UW Medicine", can be implied or are specifically mentioned. The Contractor agrees not to publish or use such advertising and publicity matters without the prior written consent of UW Community Relations and Marketing.

28. PUBLIC RECORDS ACT -- Notwithstanding any of the foregoing provisions of this section or any other provisions in the Agreement regarding confidentiality, Contractor acknowledges that HMC and UWMC are agencies of the State of Washington and are subject to Washington's Public Record Act, RCW 42.56 ("PRA"). If HMC or UWMC receive a public records request covering information that may be considered confidential under this Agreement, the sole obligation of HMC and/or UWMC hereunder shall be to provide Contractor with no less than two (2) weeks' notice prior to any disclosure so as to enable Contractor, if it should so choose, to seek an injunction or other court order against disclosure. If Contractor has not obtained and served on HMC or UWMC, as applicable, an injunction or temporary restraining order against disclosure by the disclosure date indicated in the notice to HMC and/or UWMC, then HMC and/or UWMC may disclose the requested information without further   obligation under this Agreement.

29. PROPRIETARY INFORMATION – Supplier should clearly identify and mark any material such as, but not restricted to, valuable formulae, designs, drawings, and research data, that supplier considers to be exempt from disclosure under Washington's Public Records Act, (RCW 42.56.270), and any such identification must include a citation to the specific exemptions supplier considers applicable and an explanation as to how and why Supplier believes such exemptions apply.   Failure to so mark such products shall be deemed a waiver by supplier of any claim that such products are exempt under the Public Records Act. Pricing and bid packages are proprietary and

subject to public disclosure. If HMC or UWMC receive a public records request for products provided by supplier and such products have been marked as provided hereunder, HMC's and/or UWMC's sole obligation with respect to such products will be to give notice to supplier of such public records request sufficiently in advance of disclosure as to enable supplier, if supplier so chooses, to seek an injunction or other court order against disclosure. If supplier fails to serve HMC and/or UWMC, as applicable, with an injunction, temporary restraining order, or other court order against disclosure by the disclosure date, then HMC and/or UWMC, as applicable, may disclose such products immediately or at any time thereafter without further notice to supplier and without liability of any kind to supplier.

30. RECORDS MAINTENANCE – The Contractor shall maintain, at no additional cost, complete financial records relating to this Contract and the services rendered including all books, records, documents, magnetic media, receipts, invoices, and other evidence relating to this contract and performance of the services described herein, including but not limited to, accounting procedures and practices that sufficiently and properly reflect all direct and indirect costs of any nature expended in the performance of this contract. Contractor shall retain such records for a period of six (6) years following the date of final payment. During the foregoing period, at no additional cost, these records, including products generated under this Contract, shall be subject at all reasonable times to inspection, review, or audit by Hospitals, the Office of the State Auditor, and any federal and state officials so authorized by law, rule, regulation, or agreement. If any litigation, claim, or audit is started before the expiration of the six-year (6-year) period, the records shall be retained until all litigation, claims, or audit findings involving the records have been resolved.

31. REFERRALS NOT REQUIRED – This Agreement does not impose an obligation on any party to refer patients to any other person or entity to maintain this Agreement. No person shall receive any payment hereunder for referral of any patient or ordering of any item or services.

32. REGISTRATION WITH DEPARTMENT OF REVENUE – The Contractor shall complete registration with the Washington State Department of Revenue and be responsible for payment of all taxes due on payments made under this contract.

33. REJECTION – All goods or products purchased herein are subject to approval by Hospitals. Any rejection of goods or material resulting in nonconformity to the terms, conditions, or specifications of this Contract, whether held by Hospitals or returned, will be at Contractor's risk and expense.

34. RIGHT OF INSPECTION – Contractor shall provide reasonable access to Contractor's place of business, Contractor records, and client records, to Hospitals and to any authorized agent of the state of Washington or the federal government in order to monitor, audit, and evaluate Contractor's performance and compliance with applicable regulations, and these Contract terms during the term of this Contract and for one-year (1-year) following termination or expiration of this Contract.

35. SEVERABILITY – The provisions of this contract are intended to be severable. If any term or provision is illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity of the remainder of the contract.

36. SHIPPING INSTRUCTIONS – Unless otherwise instructed, all goods are to be shipped prepaid, FOB Destination, as defined in RCW Title 62A. Where specific authorization is granted to ship goods FOB Shipping Point, Contractor agrees to prepay all shipping charges, to route cheapest common carrier, and to bill Hospitals as a separate item on the invoice for the charges. Hospitals reserve the right to refuse COD shipments. Regardless of FOB Point, Contractor agrees to bear all risks of loss, injury, or destruction of goods and products ordered herein that occur prior to delivery, and such loss, injury, or destruction shall not release Contractor from any obligation hereunder.

37. SITE SECURITY – While on Hospital premises, Contractor and its agents, employees, or subcontractors shall conform in all respects with all applicable policies, rules, or regulations, including those of Hospitals.

38. STATE AND FEDERAL LAWS – Contractor warrants that it shall comply with the applicable state and federal laws and regulations regarding wages and hours, including but not limited to the Fair Labor Standards Act and regulations promulgated by the U.S. Department of Labor, and that Contractor shall indemnify and hold Hospitals harmless from any and all damages or claims that may result from Contractor's failure to comply.

39. SUBCONTRACTING – Neither the Contractor nor any Subcontractor shall enter into subcontracts for any of the work contemplated under this contract without obtaining prior written approval of Hospitals.

40. TAXES – All payments accrued on account of payroll taxes, unemployment contributions, any other taxes, insurance or other expenses for the Contractor or its staff shall be the sole responsibility of the Contractor.

Where required by state statute or regulation, the Contractor shall pay for and maintain in current status all taxes that are necessary for contract performance. Unless otherwise indicated, Hospitals agree to pay state of Washington sales or use taxes as may be applicable to goods purchased hereunder. No charge by the Contractor shall be made for federal excise taxes and Hospitals agrees to furnish the Contractor with an exemption certificate where appropriate.

41. TERMINATION FOR CAUSE – If Hospitals determine the Contractor has failed to comply with the conditions of this contract in a timely manner, Hospitals shall have the right to suspend or terminate this Contract. Hospitals shall notify the Contractor in writing of the need to take corrective action. If corrective action is not taken within thirty (30) days, the contract may be terminated. Hospitals reserve the right to suspend all or part of the contract, withhold further payments, or prohibit the Contractor from incurring additional obligations of funds during investigation of the alleged compliance breach and pending corrective action by the Contractor or a decision by Hospitals to terminate the contract.

In the event of termination, the Contractor shall be liable for damages as authorized by law including, but not limited to, any cost difference between the original contract and the replacement or cover contract and all administrative costs directly related to the replacement contract, e.g. cost of the competitive bidding, mailing, advertising, and staff

time. The termination shall be deemed to be a "Termination for Convenience" if it is determined that the Contractor: (I) was not in default, or (2) failure to perform was outside of his or her control, fault, or negligence. The rights and remedies of Hospitals provided in this contract are not exclusive and are in addition to any other rights and remedies provided by law.

42. <u>TERMINATION FOR CONVENIENCE</u> – Except as otherwise provided in this contract, Hospitals may, by thirty (30) days written notice, calculated as from the second day after the mailing, terminate this contract, in whole or in part. If this contract is so terminated, Hospitals shall be liable only for payment required under the terms of this contract products delivered before the effective date of termination.

43. <u>TERMINATION FOR NON-APPROPRIATION OF FUNDS</u> – If Hospitals are not appropriated sufficient funds, collectively or individually, for the goods or services under this contract, and a Hospital, in its reasonable judgment, does not have other available funds to pay the Contractor, Hospitals may terminate this Contract by fifteen (15) days written notice in order to comply with RCW 28B.20.145.

44. <u>TERMINATION PROCEDURES</u> – Upon termination of this contract, Hospitals, in addition to any other rights provided in this contract, may require the Contractor to deliver to Hospitals any products specifically produced or acquired for the performance of the part of this contract that has been terminated. Hospitals shall pay to the Contractor the agreed upon price for such products.

The rights and remedies of Hospitals provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

After receipt of a notice of termination, and except as otherwise directed by Hospitals, the Contractor shall:

1.   Stop work under the contract on the date, and to the extent specified, in the notice;
2.   Place no further orders or subcontracts for products, services, or facilities except as may be necessary for completion of such portion of the work under the contract that is not terminated;
3.   Complete performance of such part of the work as shall not have been terminated by Hospitals; and
4.   Take such action as may be necessary, or as Hospitals may direct, for the protection and preservation of the products related to this contract which is in the possession of the Contractor and in which Hospitals has or may acquire an inter

45. <u>WAIVER</u> – Any failure by Hospitals to insist upon strict performance of any term or condition of the Contract, or failure to exercise or delay in exercising any right or remedy provided in this Contract or by law, or the acceptance of (or payment for) products or equipment, shall not be deemed a waiver of any right of Hospitals hereunder or of Hospitals' rights to insist upon strict performance of any term or condition of this Contract. A waiver of one default or breach shall not be deemed a waiver of any subsequent default or breach. In no event shall any waiver be construed as a modification of the terms of this contract unless so stated in a writing signed by Hospitals.

46. <u>WARRANTY</u> –

A.   Product: Contractor warrants that all products delivered under this order conform to specifications herein, shall be free from defects in material and workmanship, and shall be fit for the intended purpose. All products and services found defective shall be replaced upon notification by Hospitals. All costs of replacement, including shipping charges, are to be borne by the Contractor.

B.   Price: Contractor warrants that prices of all products or equipment, set forth herein do not exceed those charged by Contractor to any other customer purchasing the same goods or services under similar conditions and in like or similar quantities.

C.   Financial Status: Contractor warrants that at the time of the commencement of its performance under this Contract, it has not commenced bankruptcy proceedings and that there are no judgment, liens or encumbrances of any kind affecting title to any goods that are the subject of this contract.

UNIVERSITY of WASHINGTON
BUSINESS ASSOCIATE AGREEMENT
Rev. 08/02/2013

This Agreement is entered into between the University of Washington (hereinafter "Covered Entity") and _____ (hereinafter "Business Associate"). The University of Washington is a hybrid entity and has designated its healthcare components and non-healthcare components as described in UW Medicine Policy PP-01 Designation of Healthcare Components at the University of Washington. Pursuant to 45 CFR §164.103 and §164.105(a)(2)(iii)(C), the University's designation includes the entities listed at http://depts.washington.edu/comply/docs/PP_01.pdf (hereinafter "Covered Entity"). This policy also lists the organizations with whom UW Medicine is in an organized healthcare arrangement. Business Associate includes any agents and subcontractors of the Business Associate that receive, create, maintain or transmit protected health information on behalf of the business associate.

This Agreement is incorporated into all existing and current contract(s) between the parties (the "Underlying Contract(s)") under which Business Associate is carrying out activities or functions involving the use of protected health information (PHI), as this term is defined in 45 CFR Parts 160 and 164, and it replaces any prior agreement(s) entered concerning such PHI. Business Associates must reasonably and appropriately implement the standards and implementation specifications for safeguarding PHI and ensure the confidentiality, integrity, and availability of all electronic protected health information the business associate creates, receives, maintains, or transmits under federal Privacy and Information Security regulations (45 CFR Parts 160 and 164 (HIPAA) and Health Information Technology for Economic and Clinical Health (HITECH) Act) and are subject to the application of civil and criminal penalties under sections 1176 and 1177 of the Social Security Act and financial penalties under 45 CFR Sections 160.402, 160.404, 160.408, 160.410, 160.412, and 160.418. Business Associates must also comply with all requirements for protecting patient information under State Privacy regulations including but not limited to RCW 70.02. Covered Entity is committed to providing high quality patient care, education, and research. In furtherance of its mission, Covered Entity wishes to conduct transactions involving the disclosure of PHI to Business Associate for the purpose of conducting the activities set forth in the Underlying Contract(s).

Some or all of the information to be disclosed is required by law to be protected against unauthorized use, disclosure, modification or loss. In order to comply with applicable legal requirements for the protection of information, the parties agree as follows:

A. ALLOWABLE USES OF PHI

Only the minimum necessary PHI to accomplish the intended purpose of this agreement can be used or disclosed only for the following purposes (accurately describe how and why PHI will be created, received, maintained, and/or transmitted):

1. _____
2. _____
3. _____

B. OBLIGATIONS OF BUSINESS ASSOCIATE

Section 1. **Safeguarding Information.**
A. Business Associate shall only use, store, disclose, or access PHI:
    (1) In accordance with, and only to the extent permissible under the Underlying Contract; and
    (2) In full compliance with all applicable laws, regulations, rules or standards, including, but without limitation HIPAA and RCW 70.02.

B. Business Associate shall have in place policies and procedures to implement and maintain all safeguards necessary to ensure the confidentiality, availability, and integrity of all Covered Entity data. Business Associate shall deploy appropriate safeguards to implement the Secretary of Health and Human Services' annual guidance on the most effective and appropriate technical safeguards for use in carrying out security standards.

C. Where applicable Business Associate shall report to the Covered Entity possible existence of identity theft (The Federal Trade Commission has regulations known as the Red Flag Rules which are part of the Fair and Accurate Credit Transactions (FACT) Act of 2003).

Section 2. **Use or disclosure of Protected Health Information.** Business Associate shall not use or disclose PHI received from Covered Entity in any manner that would constitute a violation of federal law, including but not limited to the Health Insurance Portability and Accountability Act of 1996 and any regulations enacted pursuant to its provisions ("HIPAA Standards"), or applicable provisions of Washington state law. Business Associate shall ensure that any use or disclosure by its directors, officers, employees, contractors, and agents of PHI received from Covered Entity, or created or received on behalf of Covered Entity is in accordance with the provisions of this Agreement and applicable federal and state law. Business Associate shall not use or disclose PHI in any manner other than that permitted or required by the Covered Entity for the purpose of accomplishing services to or on behalf of Covered Entity in accordance with the Underlying Contracts. Notwithstanding the foregoing, Business Associate may use PHI for the proper management and administration of the Business Associate and to carry out its legal responsibilities.

Section 3. **Reporting Unauthorized Use or Disclosure of PHI.**
A. Business Associate shall, within five (5) working days of becoming aware of an unauthorized use or disclosure of PHI by Business Associate, its officers, directors, employees, contractors, agents or by a third party to which Business Associate disclosed PHI, report any such disclosure to Covered Entity. Such notice shall be made to the following:

    UW Medicine Compliance
    Box 359210
    Seattle WA 98195-9210
    (206) 543.3098
    comply@uw.edu

B. Business Associate shall report to the Covered Entity any Security Incident of which it becomes aware without unreasonable delay, but not later than ten (10) days, following Business Associate's discovery of any such incident.

Section 4. **Agreements by Third Parties.** Business Associate shall enter into a contract or other arrangement with agents or subcontractor(s) to ensure that the same restrictions and conditions including the implementation of reasonable and appropriate safeguards to protect PHI that apply to the BA also apply to the agents or subcontractor(s).

Section 5. **Access to Information.** If Business Associate maintains Designated Record Set (DRS) documentation on behalf of Covered Entity, Business Associate agrees to provide access to the documentation maintained by the Covered Entity. Business Associate shall make available to Covered Entity such information for so long as it is maintained. If any individual requests access to PHI directly from Business Associate, Business Associate shall forward such request to the Covered Entity. Business Associate shall not deny any individual's request for access to the individual's PHI. A denial of access to PHI requested is the responsibility of the Covered Entity.

Section 6. **Availability of PHI for Amendment.** Within five days of a request from Covered Entity for the amendment of an individual's PHI or a record regarding an individual contained in a DRS (for so long as the PHI is maintained in the DRS), Business Associate shall provide such information to Covered Entity for amendment and incorporate any such amendments in the PHI as required by 45 CFR. §164.526.

Section 7. **Accounting of Disclosures.** Business Associate agrees to implement an appropriate record keeping and reporting process to enable it to provide the following information regarding disclosures of PHI: (i) the date of the disclosure, (ii) the name of the entity or person who received the PHI, and if known, the address of such entity or person, (iii) a brief description of the PHI disclosed, and (iv) a brief statement of the purpose of such disclosure which includes an explanation of the basis for such disclosure. If Business Associate receives a request for an accounting of disclosures, Business Associate shall forward such request to Covered Entity within a reasonable time frame to allow Covered Entity to prepare and deliver any required accounting of disclosures.

Section 8. **Restrictions on Certain Disclosure of Health Information.** Business Associate agrees to restrict the disclosure of the protected health information of an individual, if Covered Entity agrees to a requested restriction by an individual. If Business Associate receives a request for a restriction, Business Associate shall forward such request to Covered Entity within five business days to allow Covered Entity to respond to the requested restriction.

Section 9. **Availability of Books and Records.** Business Associate agrees to make its internal practices, books and records relating to the use and disclosure of PHI received from Covered Entity, or created or received on behalf of Covered Entity, available to the Secretary of the U.S. Department of Health and Human Services for purposes of determining Covered Entity's and Business Associate's compliance with the HIPAA Standards. Business Associate shall provide to Covered Entity a copy of any

documentation that Business Associate provides to the Secretary within five business days.

Section 10. **Return or Destruction of Information.** At the termination of the Underlying Contract(s), Business Associate shall return or destroy all PHI received from Covered Entity, or created or received on behalf of Covered Entity, that Business Associate maintains in any form. Business Associate will retain no copies of PHI. If Business Associate determines that return or destruction of any PHI is not feasible, Business Associate shall notify Covered Entity of the reasons why return or destruction is not feasible. If destruction or return of PHI is not feasible, Business Associate shall not use PHI received from Covered Entity, or created or received on behalf of Covered Entity, in a manner other than those permitted or required by state and federal laws or for the purposes described herein.

Section 11. **Electronic Protected Health Information ("ePHI").** If Business Associate creates, receives, maintains or transmits ePHI on behalf of Covered Entity, Business Associate agrees to (1) implement administrative, physical and technical safeguards that reasonably and appropriately protect the confidentiality, integrity and availability of Covered Entity's ePHI in accordance with 45 CFR Sections 164.308, 164.310, 164.312, and 164.316 of title 45; (2) ensure that any third party agent or subcontractor who receives Covered Entity's ePHI from Business Associate agrees to implement equivalent administrative, physical and technical safeguards; and (3) deploy appropriate safeguards to implement the Secretary of Health and Human Services' annual guidance on the most effective and appropriate technical safeguards for use in carrying out security standards; and (4) report any security breaches involving Covered Entity's ePHI within five business days of discovery.

Section 12. **Breaches Involving Unsecured PHI.**
A. A breach is when unsecured PHI may have been used, accessed, disclosed, or acquired in a manner not permissible under the terms of this Agreement. Unsecured PHI means PHI that is not rendered unusable, unreadable, or indecipherable to unauthorized persons through the use of a technology or methodology specified by the Secretary in the guidance issued under section 13402(h)(2) of Public Law 111–5. If Business Associate has reason to believe that a breach has occurred, Business Associate will, within five business days of discovery, give Covered Entity notice. A breach shall be treated as discovered by the Business Associate as of the first day on which such breach is known to the Business Associate, (which includes any person, other than the individual committing the breach, who is an employee, officer, or other agent of the Business Associate) or should reasonably have been known to the Business Associate to have occurred. Business Associate shall give highest priority to immediately mitigate and remediate any unauthorized access and shall devote such resources as may be required to accomplish that goal. The Business Associate shall cooperate with all Covered Entity efforts, including providing any and all information necessary to enable Covered Entity to fully understand the nature and scope of the breach including but not limited to identification of each individual who has been affected by the breach.

B. The Business Associate will investigate a breach of unsecured PHI to determine if the PHI has been compromised based upon a risk assessment in accordance with Section 164.402 (2).

C. If it is determined that the PHI has been compromised, Covered Entity is required to provide notice to any or all individuals affected. In such case, Business Associate shall consult with Covered Entity regarding appropriate steps required to notify third parties. In the event that the Business Associate's assistance is required, such assistance shall be provided at no cost to Covered Entity and in accordance with the Covered Entity's policies and standards. Business Associate must coordinate with Covered Entity any public notification to any individual, media outlet, or the Secretary of Health and Human Services.

D. If it is determined that notification is required, the Business Associate shall pay the full costs of notice to affected individuals, including the costs to retain an outside consulting firm to undertake the notification effort and will supply UW Medicine Compliance with the following information to make such notification:

(1) A brief description of what happened, including the date of the breach and the date of the discovery of the breach, if known.
(2) A description of the types of unsecured protected health information that were involved in the breach (such as full name, Social Security number, date of birth, home address, account number, or disability code).
(3) A brief description of what the Business Associate is doing to investigate the breach, to mitigate losses, and to protect against any further breaches.

Section 13. If the Underlying Contract does not include a provision for indemnification, then the Business Associate shall indemnify, hold harmless and defend Covered Entity from and against any penalties, claims, actions, loss, liability, damage, costs, or expenses, including but not limited to reasonable attorneys' fees.

Section 14. Covered Entity has the right, at any time, to monitor, audit, and review activities and methods in implementing this Agreement in order to assure compliance therewith, within the limits of Business Associate's technical capabilities.

Section 15. **Applicability to Organized Healthcare Arrangement (OHCA) Members.** To the extent that use or disclosure of any protected health information belonging to OHCA members, http://depts.washington.edu/comply/docs/PP_01.pdf is necessary to fulfill the terms of the Underlying Contract(s), Business Associate agrees to treat that information with the same level of confidentiality as Covered Entity's PHI and in accordance with the terms of this Agreement.

C. MISCELLANEOUS

Section 16. **Termination.** Notwithstanding any provision to the contrary in the Underlying Contract(s), Covered Entity may terminate its participation in the Underlying Contract(s) immediately upon written notice to Business Associate without liability for such termination, in the event that Covered Entity determines that Business Associate has committed a material breach or violated a provision of this Agreement.

Section 17. **Definitions.** All terms herein shall be defined in accordance with 45 CFR Parts 160, 162, and 164 and state laws governing healthcare privacy including but not limited to Public Records - Personal Information – Notice of Security Breaches (RCW 42.56.590), the Uniform Healthcare Information Act (RCW 70.02), mental illness (RCW

71.05), mental health services for minors (RCW 71.34), drug and alcohol abuse (RCW 70.96A, 42 CRF part 2), and HIV/AID/STDs (RCW 70.24).

_____

Signature
Paul Hayes, RN, Executive Director
_____
HARBORVIEW MEDICAL CENTER

_____

Date

_____

Signature

Business Associate Representative Name

_____

Date

SECTION 8 – UNIVERSITY OF WASHINGTON DATA SECURITY AGREEMENT

UW Administrative Policy Statement 2.10 Minimum Data Security Standards requires data sharing (security) agreements (http://ciso.washington.edu/site/files/Data_Security_Agreement.pdf) with business partners, vendors, and other outside parties who are given UW confidential data. A Data Security Agreement shall be used when one or more of the following scenarios occur:

1. UW Medicine transfers confidential data to a contractor's offsite location.
2. Contractor accesses UW Medicine systems containing confidential data.
3. Contractor provides hardware or software support for UW Medicine systems and may have incidental access to confidential data.
4. Contractor provides hardware and/or software system preconfigured to store or process confidential data. Reconfiguration may be constrained by the technical limitations of the hardware or software that is supplied by a Contractor.

If the answers to ANY of the above statements is YES, a Data Security Agreement will be required in the final contract.

UW DATA SECURITY AGREEMENT

Addendum #_____   to Contract #_____

This Data Security Agreement (Agreement) is incorporated in and attached to that certain Agreement titled/numbered_____ and dated _____ (Contract) by and between the University of Washington (University) and (Contractor). Contractor agrees to include all of the terms and conditions contained in this Agreement in all subcontractor or agency contracts providing services under contract number _____
.
Unless defined herein, all terms take the meaning ascribed by University Administrative Policy Statement 2.4, Information Security and Privacy Roles, Responsibilities, and Definitions.

1. Disclosure of University Data

Contractor shall not use, access, or disclose University Data in any manner that would constitute a violation of state or federal law or contract or agreement terms including, without limitation, by means of outsourcing, sharing, retransfer, access, or use—to any person or entity, except:

   a. Employees or agents who actually and legitimately need to access or use University Data in the performance of Contractor's duties under this Agreement or the Contract;

   b. Such third parties, such as but not limited to, subcontractors, as may be specifically identified in this Agreement or the Contract, but only after such third party has agreed in writing and in advance of any disclosure, to be bound by all of the terms of the Agreement; or

c. Any other third party approved by the University in writing and in advance of any disclosure, but only to the extent of such approval.

2. Use of, Storage of, or Access to, University Data

Contractor shall only use, store, or access University Data:

a. In accordance with, and only to the extent permissible under this Agreement and the Contract; and

b. In full compliance with any and all applicable laws, regulations, rules, or standards including to the extent applicable, but without limitation: Family Educational Rights and Privacy Act (FERPA), Export Administration Regulations (EAR), International Traffic in Arms Regulations (ITAR), Health Insurance Portability and Accountability Act (HIPAA), the Gramm-Leach-Bliley Financial Services Modernization Act (GLB), Federal Trade Commission Red Flags Rule, the Social Security Act, Payment Card

Industry Data Security Standards (PCI-DSS), and Revised Code of Washington (RCW) 19.255.010 and 42.56.590.

c. Contractor shallnotify University in writing if Contractor obtains an export control license for Data covered by EAR or ITAR.

d. For University Data subject to FERPA, Contractor will be considered a "school official" with a "legitimate educational interest" as those terms are used in FERPA and its implementing regulations.

e. Any transmission, transportation, or storage of University Data outside the United States is prohibited except on prior written authorization by the University.

3. Safeguarding University Data

Contractor agrees that use, storage, and access to University Data shall be performed with that degree of skill, care, and judgment customarily accepted as sound, quality, and professional practices. Contractor shall implement and maintain safeguards necessary to ensure the confidentiality, availability, and integrity of University Data. If any of these safeguards represent a change to a System, these changes shall be implemented by Contractor in accordance with Contractor's approved field modification process at the time of System installation and shall be included in the price of the System.

Such safeguards shall include as appropriate, and without limitation, the following:

a. System Security. A System that is owned or supported by Contractor and contains University Data shall be secured as follows:

i. Contractor warrants that their System is free of any system settings or defects that would create a potential breach.

ii. Contractor shall provide the specifications and configuration settings of the System, including: hardware, operating system, applications, communication ports and protocols.

iii. The System shall use secure protocols (e.g. SSH, SSL, SFTPS, TLS, IPSec) to safeguard University Data in transit.

iv. Contractor understands the System may be placed on a public network and warrants the System is sufficiently protected from compromises and attacks. Contractor may need to add a host-based or external firewall to protect the System or Contractor may allow the University to add a host-based or external firewall without breach of this Agreement, Contractor's warranty or University support contract.

v. Contractor shall coordinate with the University to ensure the following:

- Limit administrative access to the System.

- Limit remote access to the System.

- Limit account access and privileges to the least necessary for the proper functioning of the System.

- Remove or disable applications and services that are not necessary for the proper functioning of the System.

- Use named user accounts and not generic or shared accounts.

- Use Kerberos, LDAP or other industry compliant services for authentication and authorization. If the System lacks the capability to utilize centralized authentication and/or authorization, a secure remote API, batch load interface or other mechanism must be provided for provisioning user accounts and privileges.

- Enable an appropriate level of auditing and logging for the operating system and applications.

vi. The System shall not be deployed with default passwords and shall allow the changing of System and user passwords.

b. System Maintenance and Support

i. Contractor and University shall agree on a process for the timely review, testing, and installation of patches essential for safeguarding the confidentiality, integrity, or availability of the System or University Data.

ii. Proper change management procedures, as defined in this document or in Contract # _____ shall be followed.

iii.   Contractor shall ensure that the System is supported.   Contractor shall provide University with notice 12 months before the System or any components become unsupported.

iv.   If necessary, Contractor shall provide remote support via a mutually agreed upon secure connection method that includes a detailed audit log of events (e.g., who, what, where, when).   Remote access shall be limited to an as needed or as requested basis; Contractor shall provide a list of accounts used for remote access.

c.   Data Protections

i.   Contractor shall only use, store, disclose, or access University Data:

1. In accordance with, and only to the extent permissible under Contract #_____   ; and

2.   In full compliance with any and all applicable laws, regulations, rules or standards, including, but without limitation, FERPA, HIPAA, GLB, the Federal Trade Commission Red Flags Rule, EAR, ITAR, the Social Security Act, PCI-DSS, RCW 19.255.010 and RCW 42.56.590.

ii.   Contractor shall have documented policies and procedures to prevent unauthorized use, disclosure loss, or acquisition of, or access to, University Data. This includes, but is not limited to personnel security measures, such as background checks.

iii.   Contractor shall provide University written notice of any employee or agent of Contractor that was or is employed by University that has access to or use of University Data. University shall have sole discretion to disallow access to or use of University Data to any person identified in such notice.

iv.   All transmission of University Data between parties shall be performed using a mutually agreed upon secure transfer method that includes a detailed audit log of events (e.g., who, what, where, when).

4. Oversight

A security audit, evaluation, or review shall be performed no less than annually to ensure compliance with Contractor's safeguards, any safeguards required under this Agreement or the Contract, and industry best practices for the protection of University Data.   If an evaluation, audit, or review identifies any error, flaw, or inadequacy with respect to any safeguard that does or may affect University Data, Contractor shall promptly notify the University. Upon the University's request, Contractor shall provide a copy of any report generated in connection with any such evaluation, audit, or review. The University and Contractor shall develop a mutually agreeable timeline to correct any such error, flaw, or inadequacy, and if Contractor is unable to make such correction, or fails to do so within a reasonable timeframe as determined by the University, the University may immediately terminate the Contract.

5. Data Breach

    a. If Contractor has reason to believe that University Data may have been accessed, disclosed, or acquired without proper authorization and contrary to the terms of this Agreement or the Contract, Contractor shall alert the University of any Data Breach within two business days, and shall immediately take such actions as may be necessary to preserve forensic evidence and eliminate the cause of the Data Breach. Contractor shall give highest priority to immediately correcting any Data Breach and shall devote such resources as may be required to accomplish that goal. Contractor shall provide the University any and all information necessary to enable the University to fully understand the nature and scope of the Data Breach. To the extent the University, in its sole discretion, deems warranted—whether in accordance with applicable Washington law such as RCW 42.56.590 or RCW 19.255.010, or federal law such as HIPAA, EAR or ITAR—the University may provide notice or require Contractor to provide notice to any or all parties affected by any Data Breach. In such case, Contractor shall consult with the University in a timely fashion regarding appropriate steps required to notify third parties. Contractor shall provide University information about what Contractor has done or plans to do to mitigate any deleterious effect or the unauthorized use or disclosure of, or access to, University Data. In the event that a Data Breach requires Contractor's assistance in reinstalling software, such assistance shall be provided at no cost to the University and in accordance with the University's policies and standards. The University may discontinue any services or products provided by Contractor until the University, in its sole discretion, determines that the cause of the Data Breach has been sufficiently mitigated.

    b. Contractor shall defend, indemnify, and save the University harmless from and against any claims, actions, loss, liability, damage, costs, or expenses, including, but not limited to, reasonable attorneys' fees, arising from any or all Data Breaches. The indemnification provided hereunder includes the full costs of forensics analysis, System remediation to eliminate the cause of the Data Breach, and notice o

to   affected individuals, including, but not limited to, the services of a third party firm.

6. No Surreptitious Code

Contractor warrants that, to the best of its knowledge, the System is free of and does not contain any code or mechanism that collects information or asserts control of the System without University's consent, or which may restrict University's access to or use of University Data.   Contractor further warrants that it will not knowingly introduce, via any means, spyware, adware, ransomware, rootkit, keylogger, virus, trojan, worm, or other code or mechanism designed to permit unauthorized access to University Data, or which may restrict University's access to or use of University Data.

7. Compelled Disclosure

If Contractor is served with any subpoena, discovery request, court order, or other legal request or command that calls for disclosure of any University Data, Contractor shall promptly notify the University in writing and provide the University sufficient time to obtain a court order or take any other action the University deems necessary to prevent disclosure or otherwise protect

University Data. In such event, Contractor shall provide University prompt and full assistance in University's efforts to protect University Data.   Where Contractor is prohibited by law from notifying the University of a legal request for University Data, Contractor will comply with all applicable laws and regulations with respect to the requested University Data.

8. Termination Procedures

Upon expiration or earlier termination of the Contract, Contractor shall ensure that no Data Breach occurs and shall follow the University's instructions as to the preservation, transfer, or destruction of University Data. The method of destruction shall be accomplished by "purging" or "physical destruction", in accordance with National Institute of Standards and Technology (NIST) Special Publication 800-88.   Contractor shall certify in writing to University that such return or destruction has been completed.

9. Survival; Order of Precedence

This Agreement shall survive the expiration or earlier termination of the Contract.   In the event the provisions of this Agreement conflict with any provision of the Contract, or Contractors' warranties, support contract, or service level agreement, the provisions of this Agreement shall prevail.

10. Definitions

    a. University Data: University Data is any and all data within the University's possession, custody, or control, and any and all data that the University has disclosed to Contractor. For the purposes of this Agreement, University Data does not cease to be University Data solely because it is transferred or transmitted beyond the University's immediate possession, custody, or control.

    b. Confidential Data: Confidential Data is University Data that is very sensitive in nature and typically subject to federal or state regulations; proprietary rights under patent, copyright, trademark, or trade secret law; or privileged against disclosure in a civil lawsuit. Unauthorized disclosure of this data could seriously and adversely impact the UW or the interests of individuals and organizations associated with the UW.

    c. Data Breach: Data Breach means any use, disclosure, loss, acquisition of, or access to, Confidential Data that is not in accordance with the terms of this Agreement, including Section 3(b) below, or the Contract.

    d. System: An assembly of components that supports an operational role or accomplishes a specific objective.   This may include a discrete set of information resources (network, server, computer, software, application, operating system or storage devices) organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information.

    e. Change Management: A formal process used to ensure that changes to a system are introduced in a controlled and coordinated manner. This reduces the possibility that unnecessary changes will be introduced to a system, that faults or vulnerabilities are introduced to the system, or that changes made by other users are undone.

ATTACHMENT A

PLEASE SUBMIT WITH RESPONSE

Minority and Women's Business Enterprise (MWBE) Response Form

This solicitation includes voluntary goals for MWBE participation. If the Vendor has been **certified** by the State of Washington Office of Minority and Women's Business Enterprises (OMWBE), please complete Part 1 below.

If the Vendor is proposing to subcontract or joint venture with certified Minority Business Enterprises (MBE's) or Women's Business Enterprises (WBE's) please complete Part 2.

If the Vendor proposes no MWBE participation in the bid, so indicate in Part 3.

1.   **MWBE VENDOR**:   Vendor is certified by the OMWBE as: circle one if applicable
        MBE   Both Minority **and** Woman Owned

        WBE   **Combination** 50% Minority / 50% Woman Owned

2.   **MWBE SUBCONTRACT PARTICIPATION**: The voluntary goals for MWBE participation in this contract are established in the accompanying solicitation. Vendor proposes to include certified MWBE's in the contract as described below:

       Certified MWBE Subcontract Participation

       Name(s) of Participating MWBE: _____
       Description of Participation: _____
       Amount of Participation: $_____Contract % Participation: _____%

3.   **NO MWBE PARTICIPATION PROPOSED**:
            No certified MWBE participation is proposed by this vendor.

                        _____
                        Signed: Vendor or authorized representative
                        Title:

Contact OMWBE at (360) 753-9693 or the University's MWBE Representative at (206) 543-5753 for details on certification.

For more description on State certification, see the additional page.

Federal Small Business Certification Response

Please indicate the appropriate selection: <u>circle if applicable</u>

  Small Business   Small Disadvantaged Business   Small Woman Owned

Please include the four digit Standard Industrial Classification (SIC) code, if known:
_____

> For more description on Federal certification, see the additional page.

<u>State of Washington Office of Minority and Women Owned Business Certification</u>

<u>GENERAL STATEMENT:</u> In accordance with the legislative findings and policies set forth in Chapter 39.19 RCW the State of Washington encourages participation in all of its contracts by MWBE firms certified by the Office of Minority and Women's Business Enterprises (OMWBE). Participation may be either on a direct basis in response to this solicitation/invitation or as a subcontractor to a Bidder/Proposer. However, unless required by federal statutes, regulations, grants or contract terms referenced in the contract documents, no preference will be included in the evaluation of bids/Quotations. No minimum level of MWBE participation shall be required as a condition for receiving an award and bids/Quotations will not be rejected or considered non-responsive on that basis. Any affirmative action requirements set forth in federal regulations or statutes included or referenced in the contract documents will apply.

<u>RECORD KEEPING:</u> The Contractor shall maintain, for at least three years after completion of this contract, relevant records and information necessary to document the level of utilization of MWBEs and other businesses as subcontractors and suppliers in this contract as well as any efforts the contractor makes to increase the participation of MWBEs as listed below. The contractor shall also maintain, for at least three years after completion of this contract, a record of all quotes, bids, estimates, or Quotations submitted to the Contractor by all businesses seeking to participate as subcontractors or suppliers in this contract. The State shall have the right to inspect and copy such records. If this contract involves federal funds, Contractor shall comply with all record keeping requirements set forth in any federal rules, regulations or statutes included or referenced in the contract documents.

<u>AFFIRMATIVE   EFFORTS   TO   INCREASE   PARTICIPATION   BY   MWBE's:</u>
Bidders/Proposers/Contractors are encouraged to:
1. Advertise opportunities for subcontractors or suppliers in a manner reasonably designed to provide MWBEs capable of performing the work with timely notice of such opportunities, and include a provision encouraging participation by MWBE bids/Quotations directly from MWBEs.
2. Provide MWBEs that express interest with adequate and timely information about plans, specifications, and requirements of the Contract.
3. Break down total requirements into smaller tasks or quantities, where economically feasible, in order to permit maximum participation by MWBEs and other small businesses.

4. Establish delivery schedules, where the requirements of this contract permit, that encourage participation by MWBEs and other small businesses.
5. Reduce bonding requirements where practicable.
6. Utilize the services of available minority community organizations, minority contractors groups, local minority assistance offices and organizations that provide assistance in the recruitment and placement of MWBEs and other small businesses.
7. The actions described in this section should supplement efforts to provide information to all qualified firms, and nothing in this section is intended to prevent or discourage the Bidders/Proposers/Contractors from inviting Quotations for participation from non-MWBE firms as well as MWBE firms.

NON-DISCRIMINATION: Contractors, Bidders and Proposers shall not create barriers to open and fair opportunities for all businesses including MWBEs to participate in all State contracts and to obtain or compete for contracts and subcontracts as sources of supplies, equipment, construction and services. In considering offers from and doing business with subcontractors and suppliers, the Contractor shall not discriminate on the basis of race, color, creed, religion, sex, age, nationality, marital status, or the presence of any mental or physical disability in an otherwise qualified disabled person.

Federal Small, Small Disadvantaged or Small Woman Owned Business Certification

In accordance with Public Law 95-507, Federal Contracts that contain Federal Acquisition Regulations (FAR) clause 52.219-8 (Utilization of Small Business Concerns and Small Disadvantaged Business Concerns) impose requirements regarding subcontracting with small businesses and small business subcontracting plans.

Refer to FAR 19.001 for guideline definitions. With regards to certification, the Small Business Administration (SBA) classifies small businesses on an industry-by-industry basis, utilizing a Standard Industrial Classification (SIC) code as described in the Code of Federal Regulations (CFR) Title 13, Part 121.

The offeror certifies that the information is true and understands that whoever, for the purpose of securing a contract or subcontract is accountable under Public Law 99-661 and the CFR Title 13, Part 124 & 125. If a firm misrepresents the status of any concern or person as a small business owned and controlled by a minority or woman owned business, they shall (1) be punished by imposition of a fine, imprisonment, or both; (2) be subject to administrative remedies including suspension and disbarment; and (3) be ineligible for participation in programs conducted under the authority of the Small Business Act.

If you need assistance in determining whether your business is considered to be small, contact the Seattle branch of the U.S. Small Business Administration at (206) 553-7310, or the University's Representative at (206) 543-5753.

ATTACHMENT A

PROPOSAL RESPONSE CERTIFICATION

HARBORVIEW MEDICAL CENTER

_____
DATE

The undersigned, as proposer, declares that he/she has read the Request for Proposals and the following proposal is submitted on the basis that the undersigned, the company and its employees or agents, shall meet, or agree to, all specifications contained therein. It is further acknowledged addenda numbers _____ to ____ have been received and were examined as part of the RFP document.

_____
Name of Proposer

_____
Signature of Proposer

_____
Title

_____
Firm Name

_____
Street Address

_____
City, State, Zip

_____
Telephone

_____
Facsimile Number

_____
E-mail Address

_____
Washington U.B.I. Number

_____
Federal Tax I.D. Number